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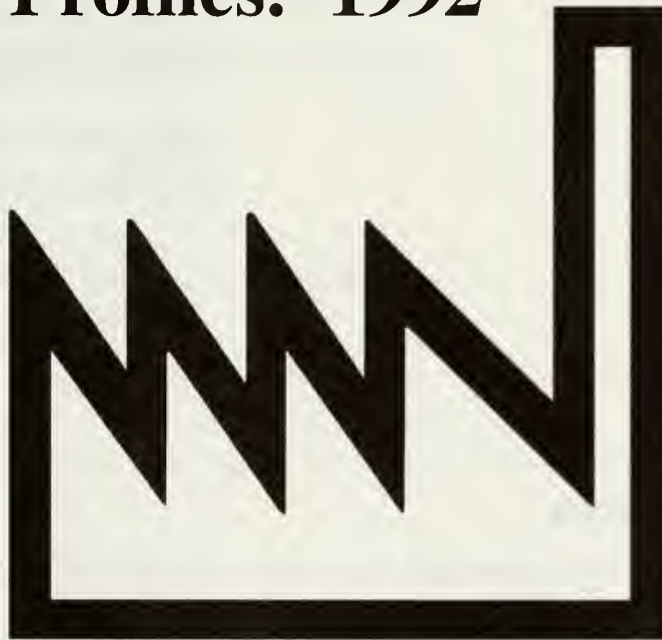
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Manufacturing Profiles: 1992



Issued August 1994



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INTRODUCTION

GENERAL

This publication presents all the data compiled in the Current Industrial Reports (CIR) program for data year 1992. These data were originally released either electronically or as printed publications from March through December 1993. This publication replaces all of the individual reports issued in the CIR series for 1992.

In the future, data will be released electronically for all individual surveys as they become available. See appendix C for instructions for accessing the data electronically. A printed "compendium" publication, including data from all of the individual surveys, will be produced at the end of the data year.

The CIR program has been providing monthly, quarterly, and annual measures of industrial activity for many years. Since 1904, with its cotton and fats and oils surveys, the CIR program has formed an essential part of an integrated statistical system involving the quinquennial census of manufactures and the annual survey of manufactures. The CIR surveys, however, provide current statistics at a more detailed product level than either of the other two statistical programs.

The primary objective of the CIR program is to produce timely, accurate data on production and shipments of selected products. The data are used to satisfy economic policy needs and for market analysis, forecasting, and decision-making in the private sector. The product-level data generated by these surveys are used extensively by individual firms, trade associations, and market analysts in planning or recommending marketing and legislative strategies, particularly if their industry is significantly affected by foreign trade. Although production and shipments information are the two most common data items collected, the CIR program collects other measures also, such as inventories, orders, and consumption. These surveys measure manufacturing activity in important commodity areas such as textiles and apparel, chemicals, primary metals, computer and electronic components, industrial equipment, aerospace equipment, and consumer goods.

The CIR program uses a unified data collection, processing, and publication system. The Census Bureau updates the survey panels for most reports annually and reconciles the estimates to the results of the broader-based annual survey of manufactures and the census of manufactures. The census of manufactures provides a complete list of all producers of the products covered by the CIR program and serves as the primary source for CIR

sampling. Where a small number of producers exist, CIR surveys cover all known producers of a product. However, when the number of producers is too large, cutoff and random sampling techniques are used. Surveys are continually reviewed and modified to provide the most up-to-date information on products produced. The CIR program includes a group of mandatory and voluntary surveys. Typically the monthly and quarterly surveys are conducted on a voluntary basis. Those companies that choose not to respond to the voluntary surveys are required to submit a mandatory annual counterpart corresponding to the more frequent survey.

FUNDING

The Census Bureau funds most of the surveys. However, a number of surveys are paid for either fully or partially by other Federal Government agencies or private trade associations. A few surveys are mandated, but all are authorized by Title 13 of the United States Code.

RELIABILITY OF DATA

Survey error may result from several sources including the inability to obtain information about all cases in the survey, response errors, definitional difficulties, differences in the interpretation of questions, mistakes in recording or coding the reported data, and other errors of collection, response, coverage, and estimation. These nonsampling errors also occur in complete censuses. Although no direct measurement of the biases due to these nonsampling errors has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize their influence.

A major source of bias in the published estimates is the imputing of data for nonrespondents, for late reporters, and for data which fail logic edits. Missing figures are imputed based on period-to-period movements shown by reporting firms. A figure is considered to be an impute if the value was not directly reported on the questionnaire, directly derived from other reported items, directly available from supplemental sources, or obtained from the respondent during the analytical review phase. Imputation generally is limited to a maximum of 10 percent for any one data cell. Figures with imputation rates greater than 10 percent are suppressed or footnoted. The imputation rate is not an explicit indicator of the potential error in published figures due to nonresponse, because the actual yearly movements for nonrespondents may or may not closely

agree with the imputed movements. The range of difference between the actual and imputed figures is assumed to be small. The degree of uncertainty regarding the accuracy of the published data increases as the percentage of imputation increases. Figures with imputation rates above 10 percent should be used with caution.

DATA REVISIONS

Statistics for previous years may be revised as the result of corrected figures from respondents, late reports for which imputations were originally made, or other corrections. Figures which have been revised by more than 5 percent from previously published figures are indicated by footnotes.

DISCLOSURE

The Bureau of the Census operates under Title 13 of the United States Code, which prohibits the Bureau from making "any publication whereby the data furnished by any particular establishment or individual under this title can be identified." This rule prohibits the Bureau from publishing data that enables a data user to derive detailed information about an individual respondent. Therefore, in the publication, a "D" appears in place of the sensitive data value.

EXPLANATION OF GENERAL TERMS

Capacity. The maximum quantity of a product that can be produced in a plant in 1 day if operating for 24 hours. Includes the capacity of idle plants until the plant is reported to be destroyed, dismantled, or abandoned.

Consumption. Materials used in producing or processing a product or otherwise removing the product from the inventory.

Exports. Includes all types of products shipped to foreign countries, or to agents or exporters for reshipment to foreign countries.

Gross Shipments. The quantity or value of physical shipments from domestic establishments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale or use. Shipments of products purchased for resale are omitted. Shipments of products made under toll arrangements are included.

Interplant Transfers. Shipments to other domestic plants within a company for further assembly, fabrication, or manufacture.

Inventories. The quantity or value of finished goods, work in progress, and materials on hand.

Machinery in Place. The number of machines of a particular type in place as of a particular date whether the machinery was used for production, prototype, or sampling, or was idle. Machinery in place includes all machinery set up in operating positions.

Net Receipts. Derived by subtracting the materials held at the end of the previous month from the sum of materials used during the current month.

Production. The total volume of products produced, including: products sold; products transferred or added to inventory after adjustments for breakage, shrinkage, and obsolescence, plus any other inventory adjustment; and products that undergo further manufacture at the same establishment.

Quantities Produced and Consumed. Quantities of each type of product produced by a company for internal consumption within that same company.

Quantity and Value of New Orders. The sales value of orders received during the current reporting period for products and services to be delivered immediately or at some future date. Also represents the net sales value of contract change documents that increase or decrease the sales value of the orders to which they are related, when the parties concerned are in substantial agreement as to the amount involved. Included as orders are only those that are supported by binding legal documents, such as signed contracts or letter contracts.

Quantity and Value of Shipments. The figures on quantity and value of shipments represent physical shipments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale. The value represents the net sales price, f.o.b. plant, to the customer or branch to which the products are shipped, net of discounts, allowances, freight charges, and returns. Shipments to a company's own branches are assigned the same value as comparable appropriate allocation of company overhead and profit. Products bought and resold without further manufacture are excluded.

Stocks. Total quantity of ending finished inventory.

Unfilled Orders (Backlog). Calculated by adding net new orders and subtracting net sales from the backlog at the end of the preceding year.

Chapter 1. Food Products

1.1 FLOUR MILLING PRODUCTS

INTRODUCTION

The data on flour milling products are from a survey that covers all firms in the United States operating wheat and rye flour mills. Some very small specialty mills are only canvassed annually.

EXPLANATION OF TERMS

Wheat Ground for Flour. Represents the purchased weight of weight ground, including the weight of foreign material (dockage). Includes the milling of Canadian wheat in bond. Measured in bushels of 60 pounds.

Rye Ground for Flour. Represents the purchased weight of rye ground, including the weight of foreign materials (dockage). Measured in bushels of 56 pounds.

Millfeed. Includes bran, middlings, shorts, and other milling by-products intended principally for use as feed materials.

Cwt. Sacks. Represents 100 pound sacks of flour. The actual average weight of the "100 pound sacks" is published below.

Capacity. Represents maximum quantity of flour that can be produced in a mill in 1 day if operating for 24 hours. Includes the capacity of idle mills until the mills are reported to be destroyed, dismantled, or abandoned.

Stocks of Flour. Represents mill stocks in all positions, sold and unsold.

Table 1. SUMMARY OF COMMERCIAL WHEAT MILLING PRODUCTION: 1982 TO 1992

Year	Wheat flour production (1,000 cwt. sacks)	Wheat ground for flour(1,000 bushels)	Millfeed production (1,000 tons)	Average pounds per cwt. sacks of flour	
				Wheat	Millfeed
1992	370,829	833,339	6,707	134.8	36.2
1991	362,311	808,966	6,436	134.0	35.5
1990	354,348	788,186	6,109	133.5	34.5
1989	342,762	761,021	6,072	133.2	35.4
1988	344,154	769,699	6,163	134.2	35.8
1987	341,565	767,507	6,260	134.8	36.7
1986	326,316	737,537	5,799	135.6	35.5
1985	313,815	700,151	5,556	133.9	35.4
1984	299,832	675,271	5,426	135.1	36.2
1983	311,587	698,951	5,655	134.6	36.3
1982	290,907	653,206	5,228	134.7	35.9

Table 2. COMMERCIAL WHEAT MILLING PRODUCTION, BY MONTH: 1991 AND 1992

Month	Wheat flour production (1,000 cwt. sacks)	Wheat ground for flour (1,000 bushels)	Millfeed production (1,000 tons)	Daily 24-hour capacity in wheat flour (1,000 cwt.)	Wheat flour mill stocks¹ (1,000 cwt.)	Average pounds per cwt. sack of flour	
						Wheat	Millfeed
1992							
Total	370,829	833,339	6,706,962	(X)	(X)	134.8	36.2
December	29,189	65,495	527,799	1,294	5,487	134.6	36.2
November	32,172	71,900	576,108	(NA)	(NA)	134.1	35.8
October	34,584	77,908	617,416	(NA)	(NA)	135.2	35.7
September	31,861	71,872	575,614	1,284	5,864	135.3	36.1
August	34,237	77,309	620,564	(NA)	(NA)	135.5	36.3
July	31,109	70,013	569,086	(NA)	(NA)	135.0	36.6
June	29,851	67,161	539,934	1,282	5,841	135.0	36.2
May	29,795	67,032	538,932	(NA)	(NA)	135.0	36.2
April	29,994	67,292	543,658	(NA)	(NA)	134.6	36.3
March	29,382	65,606	530,215	1,282	5,210	134.0	36.1
February	29,336	65,978	532,371	(NA)	(NA)	134.9	36.3
January	29,319	65,773	535,265	(NA)	(NA)	134.6	36.5
1991							
Total	362,311	808,966	6,436,192	(X)	(X)	134.0	35.5
December	29,238	65,656	527,028	1,280	5,660	134.7	36.1
November	32,735	73,445	594,173	(NA)	(NA)	134.6	36.2
October	32,246	72,219	581,701	(NA)	(NA)	134.4	36.1
September	30,089	67,703	537,239	1,277	6,336	135.0	35.7
August	31,825	71,169	570,423	(NA)	(NA)	134.2	35.8
July	29,177	65,260	518,250	(NA)	(NA)	134.2	35.5
June	27,460	60,915	485,296	1,296	8,115	133.1	35.3
May	31,380	69,850	558,689	(NA)	(NA)	133.6	35.6
April	30,464	67,641	532,229	(NA)	(NA)	133.2	34.9
March	28,371	63,248	495,348	1,281	5,474	133.8	34.9
February	29,421	65,186	511,747	(NA)	(NA)	132.9	34.8
January	29,905	66,674	524,069	(NA)	(NA)	133.8	35.0

(NA) Not available.

¹Revised by 5 percent or more from previously published figures.

(X) Not applicable.

¹Collected quarterly.

Table 3. COMMERCIAL RYE MILLING PRODUCTION, BY MONTH: 1991 AND 1992

Month	Rye flour production (1,000 cwt. sacks)	Rye ground for flour (1,000 bushels)	Millfeed production (tons)	Daily 24-hour capacity (1,000 cwt. sacks)	Stocks of rye flour ¹ (1,000 cwt. sacks)	Average pounds ground per cwt. sack of flour	
						Rye	Millfeed
1992							
Total	1,605	3,476	17,851	(X)	(X)	121.3	22.2
December	126	275	1,398	11	18	122.2	22.2
November	148	328	1,735	(NA)	(NA)	124.1	23.4
October.....	150	327	1,742	(NA)	(NA)	122.1	23.2
September.....	128	275	1,401	11	18	120.3	21.9
August.....	160	348	1,669	(NA)	(NA)	121.8	20.9
July	124	269	1,346	(NA)	(NA)	121.5	21.7
June	119	252	1,309	11	20	118.6	22.0
May	122	252	1,170	(NA)	(NA)	115.7	19.2
April.....	128	275	1,430	(NA)	(NA)	120.3	22.3
March	138	307	1,624	11	21	124.6	23.5
February.....	127	274	1,424	(NA)	(NA)	120.8	22.4
January.....	135	294	1,603	(NA)	(NA)	122.0	23.7
1991							
Total	(D)	(D)	(D)	(X)	(X)	121.6	20.9
December	(D)	(D)	(D)	(D)	(D)	121.7	18.2
November	(D)	(D)	(D)	(NA)	(NA)	120.8	20.8
October.....	(D)	(D)	(D)	(NA)	(NA)	121.0	20.9
September.....	(D)	(D)	(D)	(D)	(D)	123.5	22.1
August.....	(D)	(D)	(D)	(NA)	(NA)	121.6	21.4
July	(D)	(D)	(D)	(NA)	(NA)	119.2	19.7
June	(D)	(D)	(D)	(D)	(D)	119.9	22.2
May	(D)	(D)	(D)	(NA)	(NA)	120.8	20.8
April.....	(D)	(D)	(D)	(NA)	(NA)	119.6	18.4
March	(D)	(D)	(D)	(D)	(D)	120.9	21.0
February.....	(D)	(D)	(D)	(NA)	(NA)	119.1	19.6
January.....	(D)	(D)	(D)	(NA)	(NA)	119.8	21.7

(D) Data withheld to avoid disclosing figures for individual companies.

(NA) Not available.

(X) Not applicable.

¹Collected quarterly.

Table 4. **SUMMARY OF COMMERCIAL WHEAT MILLING PRODUCTION, BY GEOGRAPHIC AREAS: 1992 AND 1991**

Geographic area	1992			1991		
	Total (1,000 cwt. sacks)	Wheat flour production		Total (1,000 cwt. sacks)	Wheat flour production	
		Wheat ground for flour (1,000 bushels)	Daily (24-hour) capacity ¹ (cwt. sacks)		Wheat ground for flour (1,000 bushels)	Daily (24-hour) capacity ¹ (cwt. sacks)
United States	370,829	833,339	1,293,844	362,311	808,966	1,279,886
California and Hawaii	23,736	52,557	87,433	23,513	51,784	86,100
Florida	7,993	17,886	27,865	8,583	18,963	27,600
Georgia	4,444	10,552	(D)	3,776	9,061	12,500
Illinois	19,219	44,081	69,038	18,854	43,407	64,368
Indiana	(D)	(D)	(D)	(D)	(D)	(D)
Iowa	7,112	16,019	20,960	7,331	16,125	20,960
Kansas	39,590	89,301	135,580	39,704	87,871	137,200
Michigan	7,787	17,585	29,800	7,449	17,251	29,400
Minnesota	34,360	75,487	123,350	34,336	75,103	115,551
Missouri	24,335	54,883	84,900	24,273	54,219	89,528
New York	31,667	70,512	110,244	29,835	66,903	112,378
North Carolina	10,227	23,219	33,760	9,753	22,361	33,670
Ohio	23,115	52,000	81,950	21,050	47,226	82,222
Oklahoma	(D)	(D)	31,000	(D)	(D)	(D)
Oregon and Washington	13,365	29,979	49,800	12,863	28,562	51,500
Pennsylvania	14,560	33,057	50,152	13,934	31,381	48,320
Tennessee	14,702	33,511	48,364	13,846	31,384	47,550
Texas	14,174	32,365	44,060	13,721	30,954	40,600
All other states	61,789	137,609	222,780	60,936	135,051	220,115

Note: Detail may not add to total due to independent rounding.

(D) Data withheld to avoid disclosing figures for individual companies.

¹Capacity as reported for December of each year.

Table 5. QUANTITY OF WHEAT FLOUR PRODUCED, BY GEOGRAPHIC AREA: 1992 AND 1991

[1,000 cwt. sacks]

Geographic area	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1992													
United States	370,829	29,319	29,336	29,382	29,994	29,795	29,851	31,109	34,237	31,861	34,584	32,172	29,189
California and Hawaii. . .	23,736	1,792	1,740	1,817	1,971	1,944	2,039	2,083	2,149	2,046	2,238	2,069	1,842
Florida	7,993	758	759	672	676	556	557	683	779	574	664	689	626
Georgia	4,444	329	361	358	351	362	336	(D)	(D)	(D)	(D)	(D)	(D)
Illinois	19,219	1,332	1,470	1,384	1,710	1,478	1,468	1,544	1,822	1,651	1,961	1,833	1,566
Indiana	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Iowa	7,112	594	555	588	566	564	579	623	645	622	650	588	538
Kansas	39,590	3,123	2,879	3,370	3,409	3,167	3,231	3,102	3,438	3,456	3,717	3,352	3,346
Michigan	7,787	561	537	620	645	623	708	719	674	720	751	619	610
Minnesota	34,360	2,822	2,996	2,694	2,593	'2,573	'2,601	'2,799	'3,265	'2,787	'3,194	3,243	2,793
Missouri	24,335	1,956	1,936	1,913	'1,741	'1,796	'2,038	'2,165	'2,417	'2,254	'2,395	'2,019	'1,705
New York	31,667	2,444	2,441	2,450	'2,504	'2,602	'2,692	'2,763	'2,915	'2,793	'2,913	'2,670	'2,480
North Carolina	10,227	812	765	812	809	840	858	888	952	929	972	828	762
Ohio	23,115	1,861	1,818	1,822	1,875	1,771	1,942	2,043	2,156	2,124	2,132	1,865	1,706
Oklahoma	(D)	(D)	(D)	(D)	(D)	(D)	(D)	'790	'891	'800	'834	'769	'702
Oregon and Washington. .	13,365	1,070	1,076	1,139	1,109	1,110	1,075	1,129	1,172	1,121	1,226	1,074	1,064
Pennsylvania	14,560	1,082	1,247	'1,046	1,220	'1,205	'1,111	'1,220	'1,469	'1,161	'1,348	1,373	'1,078
Tennessee	14,702	1,236	1,070	1,194	1,218	1,195	1,192	1,234	1,283	1,297	1,332	1,254	1,197
Texas	14,174	1,098	1,204	1,099	1,158	1,138	'1,076	1,111	1,375	1,210	1,268	1,283	1,154
All other states	61,789	4,951	4,972	4,895	5,044	5,443	4,817	5,028	5,530	5,073	5,650	5,425	4,961
1991													
United States	362,311	29,905	29,421	28,371	30,464	31,380	27,460	29,177	31,825	30,089	32,246	32,735	29,238
California and Hawaii. . .	23,513	2,072	2,010	1,942	2,163	2,222	1,747	1,839	1,974	1,810	1,952	1,960	1,822
Florida	8,583	750	783	690	728	812	597	724	688	575	706	889	641
Georgia	3,776	(D)	(D)	(D)	(D)	380	280	336	343	323	415	412	278
Illinois	18,854	1,589	1,629	1,507	1,622	1,757	1,265	1,429	1,642	1,437	1,720	1,827	1,430
Indiana	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Iowa	7,331	582	554	571	564	557	565	738	745	597	629	620	609
Kansas	39,704	3,310	2,872	3,233	3,360	3,311	3,301	3,406	3,402	3,309	3,461	3,384	3,355
Michigan	7,449	582	601	614	660	652	581	570	598	626	766	637	562
Minnesota	34,336	2,819	3,134	2,856	2,862	3,019	2,582	2,659	2,959	2,811	2,762	3,178	2,695
Missouri	24,273	2,116	2,023	1,821	1,901	1,726	1,771	1,845	2,009	2,010	2,446	2,322	2,283
New York	29,835	2,396	2,409	2,314	2,422	2,530	2,425	2,333	2,648	2,683	2,623	2,583	2,469
North Carolina	9,753	797	727	777	846	775	771	843	858	839	882	840	798
Ohio	21,050	1,790	1,559	1,548	1,835	1,854	1,341	1,648	1,905	1,929	2,143	1,979	1,519
Oklahoma	(D)	793	749	674	765	(D)	(D)	(D)	865	870	(D)	(D)	(D)
Oregon and Washington. .	12,863	1,085	988	1,050	1,076	1,070	1,089	1,107	1,094	1,089	1,120	1,062	1,033
Pennsylvania	13,934	1,113	1,258	1,046	1,115	1,312	952	1,111	(D)	(D)	1,130	1,411	1,110
Tennessee	13,846	1,232	1,043	1,107	1,150	1,153	1,101	1,103	1,148	1,170	1,274	1,240	1,125
Texas	13,721	1,128	1,041	1,039	1,144	1,232	1,073	1,162	1,238	1,085	1,187	1,244	1,148
All other states	60,936	4,815	5,016	4,637	5,144	5,433	4,540	4,836	5,618	5,099	5,450	5,571	4,777

Note: Detail may not add to total due to independent rounding.

(D) Data withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously published figures.

Table 6. QUANTITY OF WHEAT GROUND FOR FLOUR, BY GEOGRAPHIC AREA: 1992 AND 1991

[1,000 cwt. sacks]

Geographic area	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1992													
United States	833,339	65,773	65,978	65,606	67,292	67,032	67,161	70,013	77,309	71,872	77,908	71,900	65,495
California and Hawaii....	52,557	3,967	3,863	4,032	4,359	4,309	4,524	4,630	4,776	4,550	4,967	4,495	4,085
Florida	17,886	1,701	1,705	1,498	1,494	1,235	1,257	1,541	1,787	1,295	1,467	1,524	1,382
Georgia	10,552	820	878	871	837	858	811	(D)	(D)	(D)	(D)	(D)	(D)
Illinois	44,081	3,075	3,544	3,144	3,890	3,375	3,370	3,520	4,164	3,768	4,476	4,181	3,574
Indiana	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Iowa	16,019	1,319	1,218	1,292	1,282	1,271	1,311	1,429	1,478	1,422	1,485	1,320	1,192
Kansas	89,301	6,975	6,460	7,516	7,598	7,135	7,309	7,068	7,835	7,854	8,411	7,575	7,565
Michigan	17,585	1,303	1,241	1,435	1,459	1,411	1,550	1,584	1,510	1,630	1,712	1,407	1,343
Minnesota	75,487	6,151	6,535	5,818	5,664	5,849	5,692	6,145	7,188	6,147	7,048	7,102	6,148
Missouri	54,883	4,440	4,372	4,301	'3,978	'4,044	'4,579	'4,896	'5,440	'5,098	'5,378	'4,528	'3,829
New York	70,512	5,408	5,421	5,449	'5,589	'5,827	'5,980	'6,149	'6,478	'6,251	'6,487	'5,952	'5,521
North Carolina	23,219	1,850	1,717	1,836	1,826	1,896	1,943	2,027	2,170	2,105	2,227	1,884	1,738
Ohio	52,000	4,226	4,133	4,087	4,278	4,023	4,350	4,562	4,884	4,766	4,792	4,105	3,794
Oklahoma	(D)	(D)	(D)	(D)	(D)	(D)	(D)	'1,808	'1,997	'1,816	'1,906	'1,756	'1,613
Oregon and Washington.	29,979	2,390	2,399	2,467	2,480	2,495	2,417	2,557	2,641	2,553	2,787	2,390	2,403
Pennsylvania	33,057	'2,451	2,801	'2,350	'2,793	'2,752	'2,540	'2,796	'3,371	'2,628	'3,063	'3,089	'2,423
Tennessee	33,511	2,813	2,432	2,721	2,749	2,698	2,711	2,822	2,946	2,977	3,054	2,860	2,728
Texas	32,365	2,468	2,714	2,520	2,618	2,569	2,455	2,526	3,173	2,777	2,942	2,946	2,657
All other states	137,609	11,071	11,177	10,888	11,169	12,000	10,851	11,155	12,373	11,296	12,567	11,999	11,063
1991													
United States	808,966	66,674	65,186	63,248	67,641	69,850	60,915	65,260	71,169	67,703	72,219	73,445	65,656
California and Hawaii....	51,784	4,570	4,429	4,354	4,751	4,831	3,840	4,066	4,320	3,978	4,317	4,299	4,029
Florida	18,963	1,651	1,738	1,517	1,605	1,826	1,292	1,587	1,517	1,273	1,572	1,961	1,424
Georgia	9,061	(D)	(D)	(D)	(D)	908	694	827	877	821	963	998	719
Illinois	43,407	3,607	3,692	3,420	3,672	4,021	2,898	3,281	3,819	3,338	4,026	4,304	3,329
Indiana	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Iowa	16,125	1,321	1,210	1,254	1,278	1,257	1,164	1,602	1,632	1,315	1,377	1,368	1,347
Kansas	87,871	7,221	6,324	7,158	7,376	7,295	7,365	7,552	7,558	7,399	7,706	7,514	7,403
Michigan	17,251	1,462	1,395	1,440	1,433	1,482	1,277	1,301	1,380	1,451	1,788	1,547	1,295
Minnesota	75,103	6,120	6,752	6,191	6,315	6,549	5,645	5,848	6,547	6,312	6,018	6,936	5,870
Missouri	54,219	4,782	4,526	4,036	4,179	3,865	3,957	4,166	4,378	4,511	5,475	5,244	5,100
New York	66,903	5,321	5,395	5,067	5,399	5,639	5,444	5,249	5,973	6,059	5,882	5,798	5,677
North Carolina	22,361	1,838	1,606	1,780	1,931	1,769	1,768	1,943	1,917	2,027	2,014	1,930	1,838
Ohio	47,226	4,044	3,533	3,576	4,052	4,176	2,968	3,671	4,240	4,278	4,776	4,473	3,439
Oklahoma	(D)	1,732	1,662	1,485	1,671	(D)	(D)	(D)	1,908	1,938	(D)	(D)	(D)
Oregon and Washington.	28,562	2,481	2,193	2,355	2,390	2,372	2,415	2,452	2,393	2,387	2,475	2,330	2,319
Pennsylvania	31,381	2,468	2,823	2,345	2,524	2,903	2,157	2,536	(D)	(D)	2,567	3,200	2,494
Tennessee	31,384	2,780	2,362	2,501	2,590	2,606	2,502	2,504	2,620	2,682	2,893	2,791	2,553
Texas	30,954	2,537	2,332	2,352	2,579	2,760	2,432	2,631	2,819	2,435	2,678	2,816	2,583
All other states	135,051	10,705	10,961	10,283	11,318	12,054	9,806	10,722	12,558	11,375	12,157	12,426	10,686

Note: Detail may not add to total due to independent rounding.

(D) Data withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously published figures.

Table 7. **DURUM WHEAT PRODUCTS BY MONTH: 1991 AND 1992**

Product description	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1992													
Durum wheat ground.....	67,999	'5,729	'5,839	'5,863	'5,368	'6,321	'5,084	'4,835	'6,025	'5,307	6,431	6,007	5,190
Straight semolina.....	31,905	'2,631	'2,667	'2,740	'2,529	'2,888	'2,409	'2,282	'2,845	'2,540	3,103	2,851	2,420
Blended semolina.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1991													
Durum wheat ground.....	58,969	4,931	5,574	4,325	4,637	4,547	4,173	4,390	5,189	4,525	5,979	5,822	4,877
Straight semolina.....	25,613	2,253	2,607	1,827	1,965	1,921	1,774	1,854	2,219	1,917	2,546	2,578	2,152
Blended semolina.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously published figures.

HISTORICAL NOTE

The current M20A series of monthly reports, with annual summaries of wheat ground and wheat milling products, originated in May 1923. Data by states have been published monthly since 1927. Beginning in 1931 and ending with the June 1947 report, monthly wheat flour production by capacity groups was published. The annual summary report during the years 1931 to 1964 also contained a table showing production by capacity groups. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

FUNDING

Since 1990, part of the cost of this survey has been paid by "Milling and Baking News" published by Sosland Publishing Company.

CONTACT FOR DATA USERS

For additional information about these data, contact John Miller, 301-763-7837.

1.2 CONFECTIONERY

INTRODUCTION

The data on confectionery are from a survey that covers all manufacturers in the United States producing consumer type confectionery, excluding cough drops, medicated candy, chew gum, roasted peanuts, unsweetened popcorn, and fountain syrup. Small firms that manufacture confectionery for sale at retail on the premises are classified in the retail trade and are not included in this survey of manufacturers.

Table 8 summarizes the quantity and value of manufacturers' shipments of total confectionery products over the last decade. It also shows the average quantity and value of confectionery consumed, on a per capita basis, in the United States. Table 9 shows the quantity and value of shipments of confectionery and nonconfectionery by the type of product. Table 10 shows the quantity and value of the materials that were consumed in the manufacturing process. Apparent consumption figures are derived in table 11 by subtracting the exports from the total manufacturers' shipments plus the imports.

EXPLANATION OF TERMS

Chocolate Type Products. Products which contain as an ingredient either real chocolate or a chocolate compound containing substitute raw material ingredients such as cocoa butter extenders. Products which include a mixture of chocolate type and nonchocolate type pieces (such as certain boxed assortments) are included in chocolate type assortments.

Solid. Includes hollow molded and contains no additional foods of any kind. Examples are chocolate stars, Easter bunnies, hollow chocolate Santas, solid chocolate candy bars.

Solid with Inclusions. Solid chocolate mixed with other foods such as dried fruits, nuts, and rice.

Enrobed or Molded with Bakery Product Center. Molded or enrobed chocolate exterior with a baked cookie or wafer center. May or may not have additional confectionery layers or ingredients.

Enrobed or Molded with Candy, Nuts, or Fruit Center. Examples are chocolate covered cherries, and candy bars covered in chocolate with centers of nougat, caramel, and peanuts.

Panned. Products Manufactured Using the Panning Process. Examples are bridge mix, sugar panned chocolate centers, chocolate covered nuts, and dried fruit made by the panning process.

Assortments and Others. Products comprising an assortment of two or more of the above subcategories, and/or products which do not fall into any of the above subcategories. Examples are packages or boxes containing combinations of product types.

Nonchocolate Type Products. All other confectionery products which do not contain either real chocolate or chocolate compound as an ingredient.

Hard Candy. Comprising a sugar mass which is processed to be nongrained, a sugar mass which is grained through serration, and brittles which frequently contain nuts. Examples are pops, lemon drops, pressed mints, dessert mints, candy canes, and sour balls.

Chewy Candy. Comprising a plastic-textured grained or nongrained caramel which is sometimes mixed with corn or other foods, toffee which is less plastic than caramel, taffies which vary from hard chewy to soft chewy, and grained and nongrained nougats. Examples are caramel covered popcorn, and caramels.

Soft Candy. Comprising crystallized and noncrystallized creams, fudges, grained and nongrained marshmallows, soft jellies, and gums. Examples are candy corn and orange slices.

Iced Coated. Enrobed, formed, or deposited nonchocolate confectioner's coated candies. Examples are bark, "white chocolate," and coconut bonbons.

Panned. Products manufactured using the panning process. Examples are jelly beans and Boston baked beans.

Licorice and Licorice Type. Sugar- and starch-based product flavored with licorice extract and colored black. Other flavors and colors may be substituted in licorice-type. Examples are licorice twists, licorice shoelaces, and nuggets.

Other Chocolate Products. Comprised of coatings, both chocolate and compound, including baking chocolate sold in bars and chips through retail outlets; chocolate chips and other chocolate coatings sold to bakers, ice cream manufacturers, biscuit and cracker manufacturers, and other outlets; chocolate liquor; and cocoa butter melted and cocoa cake and powder.

Milk Products. Includes all milk products such as fluid milk and cream; condensed, evaporated, and dried milk; and creamery butter.

Fats and Oils. Includes margarine, hydrogenated shortenings, corn, cottonseed, coconut, and soybean and peanut oils; excludes slab oils.

Table 8. SUMMARY OF MANUFACTURERS' SHIPMENTS OF CONFECTIONERY PRODUCTS: 1981 TO 1992

[Quantity in millions of pounds; value in millions of dollars]

Year	Quantity	Value	Per capita consumption ¹ (pounds)	Per capita consumption ¹ (dollars)
1992.....	5,314	10,265	21.2	40.4
1991.....	4,989	9,710	20.3	38.9
1990.....	4,840	9,004	20.1	36.7
1989.....	4,852	8,682	20.4	35.8
1988.....	4,570	8,278	19.2	34.4
1987.....	4,231	7,678	18.3	32.3
1986.....	4,201	7,280	18.4	31.3
1985.....	4,326	7,092	19.1	30.7
1984.....	4,265	6,610	18.9	28.9
1983.....	4,064	5,983	17.9	26.7
1982.....	3,798	5,650	16.7	24.8
1981.....	3,630	5,171	16.1	22.9

¹Production plus imports minus exports divided by population, including armed forces abroad, as of July 1, 1992.

Source of population data: U.S. Bureau of the Census, Current Population Reports, Series P25-1029 (July 1, 1992; population was 257,919,000).

Table 9. QUANTITY AND VALUE OF SHIPMENTS OF CONFECTIONERY AND NONCONFECTIONERY, BY TYPE OF PRODUCT: 1992 AND 1991

[Quantity in thousands of pounds; value in thousands of dollars]

Product description	1992		1991	
	Quantity	Value	Quantity	Value
Confectionery				
Shipments.....	5,313,928	10,265,014	4,989,286	9,710,406
Chocolate and chocolate type confectionery.....	2,657,466	6,564,756	2,614,726	6,452,405
Solid.....	355,655	774,286	337,105	688,404
Solid with inclusions.....	271,161	759,095	238,755	650,238
Enrobed or molded:				
With candy, fruit, or nut center.....	1,261,092	2,986,366	1,264,647	3,014,503
With bakery product center.....	176,386	409,969	163,748	382,587
Panned.....	382,686	989,336	438,792	1,138,527
Assortments and other.....	210,486	645,704	171,679	578,146
Chocolate type, n.s.k.....	-	-	-	-
Nonchocolate type confectionery.....	2,461,430	3,322,871	2,200,225	2,925,720
Hard candy.....	698,221	1,089,374	656,566	1,002,787
Chewy candy, including granola bars.....	408,375	669,790	397,267	663,619
Soft candy.....	644,405	610,691	588,207	547,735
Iced coated.....	27,558	45,301	28,816	52,832
Panned.....	507,082	701,899	368,996	471,536
Licorice and licorice type.....	175,789	205,816	160,373	187,211
Nonchocolate type, n.s.k.....	-	-	-	-
Confectionery, n.s.k. ¹	195,032	377,387	174,335	332,281
Nonconfectionery				
Shipments.....	1,406,453	1,399,681	1,406,881	1,462,965
Chocolate products other than confectionery:				
Baking chocolate (bars or blocks).....	12,193	20,881	10,914	17,890
Chocolate coatings (blocks, wafers, liquid).....	294,599	305,515	263,112	270,729
Chocolate liquor.....	49,194	45,118	52,807	50,383
Cocoa butter.....	30,143	38,893	27,466	39,352
Compound coatings (blocks, wafers, and liquid).....	272,842	237,544	280,834	248,563
Chocolate chips and baking pieces.....	350,431	465,677	327,364	425,819
Cocoa powder, syrup/toppings, and other.....	397,051	286,053	444,384	410,229
Not specified by kind, n.s.k.....	-	-	-	-

- Represents zero. n.s.k. Not specified by kind. ¹Revised by five percent or more from previously published figures.¹Represents estimated data for small companies, typically those with fewer than five employees, that were not included in the mailing panel.

Table 10. **CONSUMPTION OF SELECTED INGREDIENTS, BY THE U.S. CONFECTIONERY INDUSTRY: 1992 AND 1991**

[Quantity in thousands of pounds; value in thousands of dollars]

Materials	1992		1991	
	Quantity	Value	Quantity	Value
Materials consumed	(X)	3,204,429	(X)	3,248,342
Sugar (cane-beet)	2,388,812	687,813	2,319,296	678,355
Cocoa beans	510,840	302,533	508,259	318,409
Corn syrup, including HFCS and dextrose	1,430,855	179,137	1,328,444	162,858
Chocolate liquor, imported	52,185	40,669	27,536	24,107
Chocolate liquor, domestic	(D)	(D)	(D)	(D)
Cocoa powder composition coatings (coatings composed mostly of cocoa powder and fats).	47,853	23,720	45,632	22,608
Cocoa cake or powder	82,608	27,295	80,225	28,456
Cocoa butter	345,095	333,935	328,464	340,507
Chocolate coatings, milk	197,550	214,327	231,148	252,334
Chocolate coatings, other than milk	104,664	82,693	119,559	91,948
Fats and oils	228,883	99,051	213,061	87,425
Milk and milk products	464,158	376,830	460,912	361,475
Peanuts, shelled basis	335,033	244,401	352,958	314,745
Almond kernels	52,564	91,107	49,627	75,038
Other nuts and nut meats (kernels).	28,277	58,514	17,710	50,856
Coconut meat	43,721	27,654	44,712	25,876
Other edible materials ¹	467,424	314,344	451,507	286,933
Materials, n.s.k.	(X)	(D)	(X)	(D)

Note: Materials such as parts and containers consumed in the manufacturing process are not reported in this survey. This information will be available in the 1992 Census of Manufactures report for industries 2064 and 2066. Specifically excluded in this report are freight charges and other direct charges incurred by the establishment, fuels consumed, parts, containers, scrap, electric energy purchases, work done by others on materials or parts furnished by other establishments (contract work), and cost of products bought and resold in the same condition.

(D) Data withheld to avoid disclosing figures for individual companies. n.s.k. Not specified by kind. ¹Revised by 5 percent or more from previously published figures.
(X) Not applicable.

¹Includes corn starch, essential oils, eggs and egg products, fruits, jams, and other materials on which specific data were not collected.

Table 11. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF CONFECTIONERY PRODUCTS: 1992 AND 1991**

[Quantity in thousands of kilograms; value in thousands of dollars]

Product code ¹	Product description	Manufacturers' shipments		Exports of domestic merchandise ²		Percent exports to manufacturers' shipments		Imports for consumption ³		Apparent consumption ⁵		Percent imports to apparent consumption	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value ⁴	Quantity	Value	Quantity	Value
20642, 20662	Confectionery: Chocolate-type confectionery	1,205,427	6,564,756	61,346	199,137	5.1	3.0	58,761	194,837	1,202,842	6,560,456	4.9	3.0
	1991	1,186,040	6,452,405	47,985	159,962	4.0	2.5	26,188	82,181	1,164,243	6,374,624	2.2	1.3
20643	Nonchocolate-type confectionery	1,116,505	3,322,871	58,636	142,940	5.3	4.3	136,793	314,897	1,194,662	3,494,828	11.5	9.0
	1991	998,022	2,925,720	21,040	50,721	2.1	1.7	109,499	248,900	1,086,481	3,123,899	10.1	8.0
	Nonconfectionery:												
20669 81	Cocoa butter	13,673	38,893	2,821	11,700	20.6	30.1	99,512	280,324	110,364	307,517	90.2	91.2
	1991	12,459	39,352	2,426	9,739	19.5	24.7	93,187	291,525	103,219	321,138	90.3	90.8
20661 11, 21	Chocolate coatings, blocks, wafers or liquid	257,391	543,059	1,055	1,842	0.4	0.3	4,815	8,228	261,151	549,445	1.8	1.5
	1991	248,734	519,292	1,699	2,063	0.7	0.4	6,966	8,714	252,001	525,943	2.8	1.7
20661 14, 20689 12-13, 61	Other chocolate and cocoa products	366,903	817,729	32,265	82,250	8.8	10.1	198,386	242,207	533,024	977,686	37.2	24.8
	1991	378,969	904,321	25,345	67,874	6.7	7.5	213,300	252,278	566,924	1,088,725	37.6	23.2

Note: Confectionery n.s.k. is excluded from this table.

n.s.k. Not specified by kind.

¹For comparison of Standard Industrial Classification codes (domestic output), Schedule B export numbers, and HTUSA import numbers, see appendix C.

²Source: Bureau of the Census report EM 545, *U.S. Exports*.

³Source: Bureau of the Census report IM 146, *U.S. Imports for Consumption*.

⁴This dollar value represents the c.i.f. (cost, insurance, and freight) value at first port of entry in the United States plus U.S. import duties.

⁵Apparent consumption is derived by subtracting exports from the total manufacturers' shipments plus imports.

HISTORICAL NOTE

Data on confectionery products have been collected by the Bureau of the Census since 1926. In 1989, data tables showing the quantity and value of shipments of chocolate and nonchocolate type confectionery, by type of product and package, were discontinued. Also discontinued in 1989 were data showing the sales and resales of confectionery by type of customer.

Starting with 1990, data showing the quantity and value of shipments by type of product of other chocolate products (nonconfectionery) were added.

Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at the local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

FUNDING

Since 1990, this survey has been conducted under the sponsorship of the National Confectioners Association and the Chocolate Manufacturers Association.

CONTACT FOR DATA USERS

For additional information about these data, contact Andrew Kraynak, 301-763-7108 or John Miller, 301-763-7807.

1.3 FATS AND OILSEED CRUSHINGS, PRODUCTION, CONSUMPTION, AND STOCKS

INTRODUCTION

Data published in the fats and oils series were collected by mail on Bureau of the Census monthly forms: M20J, Oilseeds, Beans, and Nuts (Primary Processors); M20H, Animal and Vegetable Fats and Oils (Warehouse Stocks); M20L, Fats and Oils (Renderers); M20M, Animal and Vegetable Fats and Oils (Consumption and Stocks); and M20N, Animal and Vegetable Fats and Oils (Production, Consumption, and Stocks).

Statistics from the M20J forms show the amount of selected raw materials crushed along with the production and stocks of the byproducts extracted (crude oil and cake and meal) during the crushing process. The crushing facilities are referred to as the Primary Processors. The data are published monthly. Data on soybeans and cottonseeds are shown for selected states.

The statistics from the M20H, M20L, M20M, and M20N forms are published in the monthly report series M20K, Fats and Oils, Production, Consumption, and Stocks. This report focuses on the production and stocks of rendered animal fats, along with the production and stocks of specified primary fats and oils and end products produced during the year. Also collected are the quantities of crude oil consumed in the production of oncerefined oil.

SUMMARY OF FINDINGS

For the 1992 calendar year, soybean crushings were 37,973.1 thousand short tons. This showed an increase of 3.7 percent over the 1991 figure of 36,380.3 thousand short tons. The production of crude soybean oil was 14,249.6 million pounds and the production of refined soybean oil was 11,859.6 million pounds. This showed an increase of 4.1 percent over the 1991 figure of 13,686.1 million pounds for crude oil, and a 3.5 percent increase over the 1991 figure of 11,453.5 million pounds for refined soybean oil. The consumption of soybean oil in end products was 11,471.6 million pounds, an increase of 1.7 percent over the 1991 figure of 11,267.1 million pounds.

At the same time, cottonseed crushings were 3,742.9 thousand short tons. This represented a decrease of 1.4 percent over the 1991 figure of 3,795.7 thousand short tons. The production of crude cottonseed oil was 1,207.9 million pounds and the production of refined cottonseed oil was 999.2 million pounds in 1992. This represented a decrease of 3.8 percent over the 1991 figure of 1,255.5 million pounds for crude cottonseed oil, and an increase of 2.5 percent over the 1991 figure of 974.5 million pounds for refined cottonseed oil.

Sunflower seed crushings were 1,101.8 thousand short tons for 1992. This showed a substantial increase of 54.9 percent over the 1991 figure of 711.2 thousand short tons. The production of crude sunflower seed oil was 890.3

million pounds and the production of refined sunflower seed oil was 96.9 million pounds in 1992. This showed an increase of 53.9 percent over the 1991 figure of 578.4 million pounds for crude sunflower seed oil, and a decrease of 38.2 percent over the 1991 figure of 156.6 million pounds for refined sunflower seed oil. The consumption of sunflower seed oil in end products was 149.5 million pounds in 1992. This was a decrease of 18.2 percent over the 1991 figure of 182.6 million pounds.

Also, for the calendar year 1992, the production of refined peanut oil and refined coconut oil increased 44.1 percent and 5.4 percent respectively, while the production of refined corn oil decreased 8.5 percent. At the same time, the consumption in end products of peanut oil increased 29.1 percent, coconut oil increased 7.3 percent, while the consumption in end products for corn oil decreased 4.3 percent.

SCOPE OF SURVEY

The data on fats and oils are from surveys that cover all plants in the United States that crush vegetable oil-bearing materials (oilseeds, beans, nuts, etc.). This survey also covers all firms producing or consuming major edible fats and oils, and warehouses storing these products. Following is a description of the types of establishments included in this survey:

1. Plants that use alkali refining or similar processes to clarify crude vegetable oils and remove excess fatty acids.
2. Plants that use animal fats or once refined vegetable oils in the production of edible fats and oils, such as salad oil, cooking oil, shortening, margarine, hard butter, mellorine fats, monoglycerides, diglycerides. In general, plants consuming fully refined edible fats and oils in the further manufacture of food products are not included. In this regard, salad dressing plants that use fully refined deodorized vegetable oils (salad oils) are not included; nor are bakeries, salad oil blending plants, or potato chip plants. Similar plants that refine their own oils are included. With minor exceptions, reporting plants are those equipped for fats and oils processing that either remove undesirable material, or on a commercial scale, alter the color, odor, or melting point.
3. Plants using crude or once refined fats and oils in such industrial products as soap, paint, varnish, plastics, or other products containing substantial amounts of fats and oils.
4. Plants that render crude material into lard, edible and inedible tallow and grease, either as their primary operation or as an adjunct to meatpacking.

5. Terminals and warehouses storing fats and oils in bulk or in drums, including public and private storage. Warehouses storing only end products such as packaged salad oil, lard, and shortening are not included.

EXPLANATION OF TERMS

Net Receipts at Mills (Current Month). Figures under this heading are derived by subtracting stocks held at the end of the previous month from the sum of materials crushed during the current month and stocks held at the end of the current month.

Shipments and Transfers (Current Month). Figures under this heading are derived by subtracting stocks held at the end of the current month from the sum of stocks held at the end of the previous month and production during the current month.

Linters. The fuzz or short fibers that adhere to cottonseed after ginning.

Hulls. The outer covering of cottonseeds or soybeans.

Cake and Meal. The residue left after the oil is extracted from a seed, nut, or kernel.

Crude Vegetable Oils. Oil until it has been processed by an alkali or caustic wash or by some equivalent operation.

Lecithin. A mixed phosphatide product obtained from soybean oil in the degumming process.

Refined Vegetable Oils. Includes oils that have undergone an alkali or caustic wash or a similar process but have not passed through a further stage of refinement.

Salad or Cooking Oils. Salad or cooking oils are vegetable oil products, completely liquid at room temperature, that have been deodorized or winterized and deodorized.

Baking and Frying Fats. Baking and frying fats, commonly known as shortening, are animal or vegetable fats or oils or combinations thereof, that have been deodorized or hydrogenated and deodorized and that are sold entirely for baking or frying purposes. They exhibit consistencies that may be fluid, plastic, or solid at room temperature.

Margarine, Soft (1-lb). Includes margarine packaged in a cardboard sheath containing two half-pound tubs.

Consumer (Retail) Products, Solids or Rolls. Includes only those products packaged for sale directly to the retail (consumer) market.

Table 12. RECEIPTS, CRUSHINGS AND STOCKS OF MAJOR RAW MATERIALS AT OIL MILLS: 1992

[Thousands of short tons]

Product description	Total	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Feb.	Jan.
Soybeans:													
Receipts at mills	37,740.4	2,938.0	3,546.2	5,995.6	3,113.3	2,698.9	2,783.1	2,763.2	2,669.4	2,599.5	2,767.0	2,670.5	3,195.7
Crushed or used	37,973.1	3,486.0	3,393.7	3,416.1	3,037.0	3,070.2	3,068.7	2,998.8	2,857.1	3,046.8	3,214.9	3,022.6	3,361.2
Stocks ¹	3,573.8	3,573.8	4,121.9	3,969.4	1,390.0	1,313.6	1,684.8	1,970.4	2,205.9	2,393.6	2,841.0	3,288.9	3,641.0
Cottonseed:													
Receipts at mills	3,607.8	617.1	1,020.2	1,303.6	226.7	75.2	-29.6	-14.8	-33.5	-32.0	19.1	124.2	331.7
Crushed or used	3,742.9	372.1	353.3	323.2	162.9	245.7	270.2	292.1	245.4	297.8	381.3	378.3	420.6
Stocks ¹	2,245.3	2,245.3	2,000.4	1,333.5	353.1	289.4	459.9	759.8	1,066.6	1,345.5	1,675.3	2,037.5	2,291.6
Peanuts:													
Receipts at mills	443.3	19.9	22.0	25.3	27.2	26.3	41.8	56.5	41.8	57.5	52.0	33.4	39.4
Crushed or used	445.9	19.8	24.0	27.6	41.1	35.5	42.8	46.0	46.0	47.6	48.8	32.0	34.6
Stocks ¹	8.5	8.5	8.5	10.5	12.8	26.3	35.5	36.4	25.9	30.1	20.2	17.0	15.6
Linseed:													
Receipts at mills	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Crushed or used	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks ¹	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Sunflower:													
Receipts at mills	1,050.4	86.3	135.7	127.8	35.0	32.7	87.2	110.6	71.4	87.7	97.7	82.9	95.5
Crushed or used	1,101.8	123.4	79.3	74.5	72.4	45.0	68.7	109.9	103.7	102.0	107.5	103.9	111.5
Stocks ¹	89.0	89.0	126.2	69.8	16.5	53.8	66.2	47.7	47.0	79.3	93.6	103.4	124.4
Safflower:													
Receipts at mills	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Crushed or used	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks ¹	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Rapeseed:													
Receipts at mills	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Crushed or used	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks ¹	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other:													
Receipts at mills	-	-	-	-	-	-	-	-	-	-	-	-	-
Crushed or used	-	-	-	-	-	-	-	-	-	-	-	-	-
Stocks ¹	-	-	-	-	-	-	-	-	-	-	-	-	-

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

¹Calculated at the end of the period.

Table 13. PRODUCTION, CONSUMPTION, SHIPMENTS AND TRANSFERS, AND STOCKS OF MAJOR CRUDE AND REFINED ANIMAL AND VEGETABLE FATS AND OILS: 1992

Product description	Unit of measure	Total	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Feb.	Jan.
SOYBEAN OIL														
Production:														
Crude oil	Mil. of lb.	14,249.6	1,238.6	1,200.3	1,238.0	1,157.7	1,178.6	1,176.6	1,151.6	1,095.6	1,167.3	1,228.4	1,147.0	1,270.0
Refined oil .....	.....do	11,859.6	951.0	999.4	1,095.6	1,040.7	997.6	979.2	977.9	993.3	973.1	1,041.3	876.7	933.8
Cake and meal	Mil. of s. tons ..	28,383.0	2,595.2	2,543.9	2,550.1	2,259.9	2,290.6	2,299.8	2,238.2	2,131.2	2,283.7	2,405.7	2,259.4	2,525.3
Lecithin .....	.....do	58.0	4.5	4.7	5.2	4.9	4.7	4.9	5.1	4.7	4.5	5.1	4.9	4.8
Millfeed .....	.....do	1,686.3	168.3	153.4	148.0	137.4	138.4	134.4	134.2	131.3	127.6	138.7	134.4	140.2
Shipments and transfers:														
Cake and meal .....	.....do	28,475.6	2,642.8	2,446.8	2,647.1	2,317.3	2,265.4	2,308.7	2,266.1	2,139.9	2,287.1	2,375.1	2,233.7	2,545.6
Millfeed .....	.....do	1,695.5	171.1	147.0	154.4	141.1	133.3	139.7	141.9	122.7	129.5	145.0	127.1	142.6
Consumption:														
Crude in refining ¹	Mil. of lb.	12,216.7	979.6	1,028.2	1,129.0	1,074.1	1,029.8	1,009.7	1,009.7	1,022.7	1,003.5	1,068.7	901.6	960.2
In end product ² .....	.....do	11,471.6	946.1	951.8	1,061.7	1,019.8	932.4	935.5	962.1	956.7	947.9	1,010.1	867.0	880.4
In edible products .....	.....do	11,168.7	923.0	930.0	1,036.2	994.4	906.1	906.1	937.9	932.2	919.3	984.0	842.6	857.0
Baking and frying fats .....	.....do	4,140.2	342.2	368.4	395.0	382.0	346.9	328.2	335.5	333.3	337.4	344.7	303.2	323.3
Salad and cooking oil .....	.....do	4,931.1	374.4	368.0	441.3	421.1	398.1	430.0	436.4	450.0	410.5	447.9	377.5	376.0
Margarine .....	.....do	1,925.8	186.6	175.9	184.8	173.6	149.4	134.7	151.3	135.9	157.3	177.3	150.3	148.6
Other .....	.....do	171.5	19.7	17.6	15.1	17.7	11.7	13.3	14.7	12.9	14.1	14.1	11.6	9.1
In inedible products .....	.....do	302.8	23.2	21.8	25.5	25.5	26.3	29.4	24.2	24.5	28.6	26.2	24.4	23.4
Paint and varnish .....	.....do	43.5	2.6	2.4	3.1	3.0	3.8	4.3	3.5	4.1	5.4	4.1	4.2	3.0
Resins and plastics .....	.....do	94.0	5.9	5.7	7.3	8.0	9.2	9.5	8.8	8.2	8.9	8.1	7.0	7.5
Stocks:														
Crude oil	Mil. of lb.	2,041.5	2,041.5	1,885.0	1,856.1	2,026.2	2,126.8	2,205.0	2,216.8	2,213.9	2,211.3	2,175.8	2,156.8	1,915.8
Refined oil .....	.....do	238.6	238.6	220.2	220.2	213.2	236.0	215.9	209.7	219.6	211.2	224.3	245.7	243.7
Cake and meal	Mil. of s. tons ..	321.3	321.3	368.9	271.9	199.8	257.1	231.8	240.7	268.5	277.3	280.6	250.0	224.3
Millfeed .....	.....do	39.5	39.5	42.4	36.0	30.2	33.8	28.7	34.0	41.7	33.1	35.0	41.3	34.0
COTTONSEED OIL														
Production:														
Crude oil	Mil. of lb.	1,207.8	117.6	110.2	99.5	56.8	77.8	91.3	91.8	79.3	97.5	121.5	127.2	137.4
Refined oil .....	.....do	999.2	91.9	90.2	72.6	46.3	69.3	81.1	82.1	73.4	85.6	97.9	105.6	103.2
Cake and meal	Mil. of s. tons ..	1,685.8	160.5	150.2	143.7	76.0	111.2	127.8	129.9	111.7	138.2	173.5	170.5	192.6
Hulls .....	.....do	1,016.5	111.9	100.1	87.5	43.4	68.6	73.2	76.7	61.0	76.8	104.8	102.0	110.5
Linters¹:														
First cut	Mil. of lb.	108.3	12.0	11.4	10.0	4.7	5.3	6.5	6.2	8.2	8.3	10.5	10.8	14.3
First cut	Thous. of bales.	173.1	19.2	18.2	15.9	7.5	8.5	10.4	10.0	13.2	13.2	16.8	17.3	22.9
Second cut	Mil. of lb.	436.7	45.0	42.4	37.6	18.3	28.0	29.2	30.4	30.0	32.5	47.1	47.7	48.4
Second cut	Thous. of bales.	688.8	71.0	66.8	59.4	28.8	44.2	46.1	47.9	47.3	51.3	74.4	75.3	76.3
Mill run	Mil. of lb.	51.4	4.9	5.4	5.5	3.6	2.8	4.6	3.5	1.3	4.0	4.8	4.9	6.4
Mill run	Thous. of bales.	82.7	7.8	8.7	8.8	5.8	4.4	7.3	5.6	2.0	6.4	7.8	7.8	10.3
Shipments and transfers:														
Cake and meal	Mil. of s. tons ..	1,695.1	176.9	145.6	148.3	91.8	111.6	139.1	127.8	116.7	141.2	157.4	154.2	184.4
Hulls .....	.....do	1,040.7	102.7	89.2	98.4	66.1	67.6	67.0	70.5	76.0	85.7	107.6	98.7	111.1
Linters¹:														
First cut	Mil. of lb.	106.1	8.5	9.8	11.6	8.9	8.1	8.1	8.2	6.8	7.3	8.0	7.9	13.0
First cut	Thous. of bales.	169.4	13.7	15.6	18.6	14.2	13.0	12.9	13.1	10.8	11.6	12.7	12.5	20.7
Second cut	Mil. of lb.	429.7	47.2	43.6	36.4	25.8	28.3	31.4	30.9	24.6	30.2	45.0	37.0	49.4
Second cut	Thous. of bales.	677.9	74.5	68.8	57.4	40.7	44.6	49.5	48.8	38.7	47.7	70.9	58.4	77.9
Mill run	Mil. of lb.	53.0	5.2	6.2	4.7	4.1	3.4	5.9	2.7	1.4	4.5	4.1	4.8	5.9
Mill run	Thous. of bales.	86.4	8.4	10.0	8.7	6.6	5.5	9.6	4.4	2.2	7.3	6.6	7.7	9.5
Consumption:														
Crude in refining	Mil. of lb.	1,034.1	95.5	93.3	75.7	48.6	72.7	84.6	84.2	76.0	88.7	101.3	108.9	104.6
In end product ² .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In edible products .....	.....do	678.8	55.9	57.2	58.4	59.3	53.9	56.5	63.4	56.7	54.2	63.5	48.6	51.1
Baking and frying fats .....	.....do	241.2	17.1	20.2	19.8	18.4	17.5	19.3	20.0	20.0	21.2	27.0	18.8	22.1
Salad and cooking oil .....	.....do	373.9	34.0	32.8	32.1	34.0	31.2	32.1	38.5	31.9	28.2	30.4	24.7	24.2
Margarine .....	.....do	24.0	1.8	1.5	2.5	3.7	1.6	1.2	1.8	2.0	1.6	2.7	1.7	2.0
Other .....	.....do	39.7	3.1	2.8	4.0	3.3	3.8	4.0	3.3	2.8	3.2	3.4	3.4	2.8
In inedible products .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 13. PRODUCTION, CONSUMPTION, SHIPMENTS AND TRANSFERS, AND STOCKS OF MAJOR CRUDE AND REFINED ANIMAL AND VEGETABLE FATS AND OILS: 1992—Continued

Product description	Unit of measure	Total	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Feb.	Jan.
Stocks:														
Crude oil .....	.....do	38.9	38.9	43.7	32.6	24.0	29.1	41.6	60.0	70.7	72.9	76.3	65.2	68.1
Refined oil .....	.....do	71.5	71.5	56.4	49.2	53.6	65.3	78.2	79.8	83.3	98.6	104.0	118.5	105.0
Cake and meal	Mil. of s. tons ..	49.6	49.6	66.1	61.5	42.7	58.4	58.8	70.1	68.0	73.1	76.1	59.9	43.7
Hulls .....	.....do	37.0	37.0	27.9	17.0	13.8	36.5	35.5	29.3	23.1	38.1	47.0	49.8	46.5
Linters¹:														
First cut	Mil. of lb.	24.3	24.3	20.8	19.2	16.5	20.7	23.5	25.1	27.1	25.6	24.6	22.1	19.1
First cut	Thous. of bales.	38.8	38.8	33.3	30.6	26.3	33.1	37.6	40.1	43.2	40.9	39.3	35.3	30.6
Second cut	Mil. of lb.	36.5	36.5	38.7	39.9	36.5	44.0	44.3	46.4	47.0	41.5	39.2	37.0	26.3
Second cut	Thous. of bales.	57.5	57.5	61.0	63.0	57.5	69.4	69.9	73.2	74.1	65.5	61.8	58.4	41.5
Hulls	Mil. of lb.	2.7	2.7	3.1	3.9	3.8	4.3	4.9	6.3	5.6	5.7	6.3	5.6	5.4
Hulls	Thous. of bales.	4.3	4.3	4.9	6.2	6.1	6.9	8.0	10.2	9.0	9.2	10.1	9.0	8.7
CORN OIL														
Production:														
Crude oil	Mil. of lb.	1,856.0	151.6	151.8	168.1	153.6	162.4	165.0	160.0	150.2	153.3	164.5	137.5	138.1
Refined oil .....	.....do	1,083.7	88.3	97.0	94.5	90.2	82.0	86.6	99.7	91.7	88.7	88.7	82.8	93.5
Consumption:														
Crude in refining .....	.....do	1,146.4	93.7	102.5	100.5	95.4	85.9	91.7	104.3	97.8	93.9	94.3	87.9	98.6
In end product ² .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In edible products .....	.....do	1,084.5	96.4	90.4	93.7	93.8	84.4	82.1	102.1	89.9	83.0	101.8	82.0	84.9
Baking and frying fats .....	.....do	322.2	25.6	26.1	24.5	25.0	23.7	25.4	30.2	27.4	28.3	31.2	26.5	28.3
Salad and cooking oil .....	.....do	586.3	50.6	51.4	56.1	53.3	50.4	46.5	50.6	48.8	43.5	51.2	43.4	40.6
Margarine .....	.....do	176.0	20.2	12.9	13.1	15.5	10.3	10.3	21.3	13.7	11.2	19.4	12.2	16.0
Stocks³:														
Crude oil .....	.....do	185.8	185.8	158.7	152.2	156.3	144.9	97.9	69.4	79.9	70.4	71.0	68.8	70.1
Refined oil .....	.....do	39.5	39.5	42.4	33.9	40.2	40.9	39.9	42.1	39.3	37.4	36.1	41.2	46.2
PEANUT OIL														
Production:														
Crude oil	Mil. of lb.	381.5	15.6	19.2	24.2	35.1	31.3	37.3	40.6	39.8	40.9	42.5	26.8	28.0
Refined oil .....	.....do	181.1	16.0	14.7	19.3	20.4	14.6	17.0	11.6	16.0	15.3	13.4	11.1	11.7
Cake and meal	Mil. of s. tons ..	251.3	11.3	13.7	15.5	23.5	19.6	24.4	25.6	26.2	27.1	28.4	17.0	19.0
Shipments and transfers:														
Cake and meal .....	.....do	253.9	15.8	9.9	19.2	22.0	21.0	26.7	25.3	29.2	24.8	25.7	17.0	17.4
Consumption:														
Crude in refining	Mil. of lb.	188.4	16.6	15.2	20.2	21.4	15.4	17.6	11.9	16.8	15.8	13.9	11.3	12.3
In end product ² .....	.....do	182.1	14.5	15.8	15.0	19.7	15.1	16.1	13.6	15.2	17.1	12.8	13.1	14.2
In edible products .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Salad and cooking oil .....	.....do	171.4	13.8	14.9	14.1	18.9	14.1	15.2	13.0	14.0	16.2	12.0	11.7	13.4
Stocks³:														
Crude oil .....	.....do	50.2	50.2	56.6	54.5	50.2	53.5	46.2	56.1	28.6	31.0	26.6	39.0	33.3
Refined oil .....	.....do	7.9	7.9	5.9	5.8	5.6	5.7	5.3	4.9	5.8	4.2	5.5	4.0	4.8
Cake and meal	Mil. of s. tons ..	2.4	2.4	6.9	3.2	5.3	3.8	5.2	7.4	7.1	10.1	7.7	5.0	5.0
LINSEED OIL														
Production:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Refined oil .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons ..	165.5	10.3	9.4	14.3	18.0	9.9	16.3	13.7	13.6	15.7	15.9	13.4	14.9
Shipments and transfers:														
Cake and meal .....	.....do	167.8	11.0	9.9	13.9	17.3	10.7	16.5	13.7	13.9	16.3	15.4	12.1	17.2
Consumption:														
Crude in refining	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In end product ² .....	.....do	154.4	8.0	6.9	11.2	11.5	14.8	16.3	11.4	15.3	15.0	13.0	15.5	15.5
In inedible products .....	.....do	154.4	8.0	6.9	11.2	11.5	14.8	16.3	11.4	15.3	15.0	13.0	15.5	15.5
Paint and varnish .....	.....do	69.0	4.0	2.9	6.7	5.4	5.4	8.5	4.7	5.5	9.5	3.6	6.7	5.9
Resins and plastics .....	.....do	31.3	1.2	1.3	1.8	2.6	2.4	2.8	2.6	2.5	1.9	3.7	3.6	5.0
Stocks³:														
Crude oil .....	.....do	39.9	39.9	47.7	49.1	41.3	29.7	35.5	34.6	41.4	45.7	45.6	62.3	51.2
Refined oil .....	.....do	21.6	21.6	20.2	23.6	23.5	17.6	25.3	28.9	16.9	24.8	24.3	21.8	21.9
Cake and meal	Mil. of s. tons ..	0.6	0.6	1.3	1.7	1.6	0.9	1.8	1.9	1.9	2.2	2.8	2.3	1.0

See footnotes at end of table.

Table 13. PRODUCTION, CONSUMPTION, SHIPMENTS AND TRANSFERS, AND STOCKS OF MAJOR CRUDE AND REFINED ANIMAL AND VEGETABLE FATS AND OILS: 1992—Continued

Product description	Unit of measure	Total	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Feb.	Jan.
SUNFLOWER OIL														
Production:														
Crude oil	Mil. of lb.....	890.4	96.5	59.9	58.8	58.4	35.8	55.2	88.9	85.0	82.6	85.0	88.0	96.2
Refined oil .....	.....do	96.9	6.6	7.8	7.5	8.4	9.4	10.4	10.5	6.5	8.9	7.5	6.8	6.7
Cake and meal	Mil. of s. tons ..	540.7	60.3	42.8	36.7	33.3	22.3	34.9	54.8	51.4	50.3	50.8	50.0	53.1
Shipments and transfers:														
Cake and meal .....	.....do	536.8	57.2	44.7	34.8	31.6	23.9	41.7	55.7	46.6	52.0	52.7	46.0	49.9
Consumption:														
Crude in refining ¹	Mil. of lb.....	100.8	6.8	8.0	7.8	8.8	9.9	10.8	10.8	6.7	9.3	7.8	6.9	7.1
In end product ² .....	.....do	149.5	13.3	14.4	14.9	16.1	14.1	14.4	10.4	10.4	10.0	10.8	10.9	9.6
In edible products .....	.....do	143.7	13.0	14.0	14.4	15.6	13.6	13.7	9.8	9.8	9.7	10.4	10.5	9.1
In inedible products .....	.....do	5.7	0.3	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.3	0.4	0.4	0.5
Stocks³:														
Crude oil .....	.....do	101.6	101.6	81.8	89.7	87.1	136.0	226.0	234.8	230.3	246.4	256.6	255.7	195.1
Refined oil .....	.....do	9.3	9.3	8.9	9.5	12.7	12.5	14.1	15.2	13.8	13.7	9.2	9.8	14.8
Cake and meal	Mil. of s. tons ..	4.9	4.9	1.8	3.7	7.3	5.6	7.1	14.0	14.9	10.1	11.8	13.7	9.6
SAFFLOWER OIL														
Production:														
Crude oil	Mil. of lb.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Refined oil .....	.....do	18.6	(D)	(D)	(D)	(D)	(D)	(D)	2.1	1.2	1.9	1.6	2.7	(D)
Cake and meal	Mil. of s. tons ..	53.7	4.9	3.9	5.5	7.9	10.1	3.3	1.6	3.6	4.6	5.3	1.4	1.6
Shipments and transfers:														
Cake and meal .....	.....do	45.1	5.3	8.1	1.3	5.8	4.5	4.7	3.0	3.0	2.2	2.1	2.7	2.4
Consumption:														
Crude in refining ¹	Mil. of lb.....	19.1	(D)	(D)	(D)	(D)	(D)	(D)	2.2	1.2	2.1	1.6	2.7	(D)
In end product ² .....	.....do	34.2	2.6	2.9	2.9	2.7	2.6	2.5	2.8	2.7	2.5	3.6	3.0	3.4
In edible products .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In inedible products .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks³:														
Crude oil .....	.....do	22.9	22.9	28.7	30.5	27.8	23.2	11.8	7.5	16.4	17.2	18.9	20.2	21.5
Refined oil .....	.....do	1.4	1.4	2.0	1.4	0.7	0.8	0.7	0.6	0.5	0.8	0.9	1.6	2.3
Cake and meal	Mil. of s. tons ..	4.7	4.7	5.2	9.4	12.9	10.8	5.2	6.6	8.0	7.4	5.0	1.8	3.1
RAPESEED OIL														
Production:														
Crude oil	Mil. of lb.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Refined oil .....	.....do	242.8	15.8	19.9	16.2	28.8	30.2	16.2	20.5	19.3	17.9	25.1	18.6	14.3
Cake and meal	Mil. of s. tons ..	3.3	-	0.8	-	0.3	0.7	0.1	-	0.3	0.1	0.6	0.1	0.2
Shipments and transfers:														
Cake and meal .....	.....do	3.0	0.1	0.7	0.1	0.3	0.5	-	-	0.4	0.1	0.5	0.2	0.1
Consumption:														
Crude in refining ¹	Mil. of lb.....	251.6	16.6	20.6	17.0	29.8	31.2	16.7	21.4	19.3	18.6	26.2	19.3	14.8
In end product ² .....	.....do	377.6	(D)	(D)	(D)	(D)	(D)	(D)	23.2	26.7	28.5	29.9	27.6	28.7
In edible products .....	.....do	360.5	31.4	30.5	37.1	37.0	34.6	31.0	22.7	25.7	27.3	29.5	26.4	27.5
Baking and frying fats .....	.....do	77.9	7.2	5.8	7.7	7.0	7.2	7.3	5.4	6.0	6.4	6.8	6.3	4.8
In inedible products .....	.....do	17.1	(D)	(D)	(D)	(D)	(D)	(D)	0.5	1.0	1.2	0.5	1.2	1.3
Stocks³:														
Crude oil .....	.....do	51.2	51.2	50.5	63.6	49.6	69.0	42.4	93.4	77.3	77.1	44.2	51.3	68.9
Refined oil .....	.....do	16.4	16.4	23.3	20.7	21.8	23.5	16.2	23.4	21.5	21.7	23.8	21.0	32.5
Cake and meal	Mil. of s. tons ..	0.3	0.3	0.3	0.2	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1
LARD														
Production:														
.....	Mil. of lb.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Consumption:														
In end products ² .....	.....do	479.7	37.2	41.0	46.4	47.6	41.1	42.9	39.6	38.7	40.0	39.9	31.6	33.9
In edible products .....	.....do	345.0	26.6	29.3	34.5	36.0	29.0	31.7	27.9	25.2	28.7	27.5	23.3	25.4
Baking and frying fats .....	.....do	310.4	23.9	26.5	31.9	33.3	26.3	29.0	24.9	23.0	25.8	23.8	20.2	21.8
In inedible products .....	.....do	134.8	10.6	11.7	11.9	11.6	12.1	11.2	11.7	13.5	11.3	12.4	8.3	8.5
Lubricants .....	.....do	10.9	0.6	0.8	0.9	0.8	1.0	1.0	1.2	1.1	1.2	1.0	0.7	0.6
Other inedible products .....	.....do	123.9	10.0	10.9	11.1	10.8	11.1	10.2	10.6	12.4	10.0	11.4	7.6	7.8
Stocks³:														
.....	.....do	22.7	22.7	24.8	22.2	27.2	26.9	29.2	24.8	23.2	26.7	28.3	28.9	27.2

See footnotes at end of table.

Table 13. PRODUCTION, CONSUMPTION, SHIPMENTS AND TRANSFERS, AND STOCKS OF MAJOR CRUDE AND REFINED ANIMAL AND VEGETABLE FATS AND OILS: 1992—Continued

Product description	Unit of measure	Total	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Feb.	Jan.
EDIBLE TALLOW														
Production.....	Mil. of lb.....	1,526.8	112.4	119.2	126.2	141.3	133.0	126.8	142.3	141.3	112.8	132.7	116.9	121.8
Consumption:														
In end products ².....	.....do.....	595.0	47.0	51.1	54.2	52.5	50.8	46.0	53.3	44.6	43.2	53.9	50.0	48.4
In edible products.....	.....do.....	429.3	30.8	35.7	37.7	38.8	34.5	32.3	38.9	32.8	32.7	43.1	36.7	35.3
Baking and frying fats.....	.....do.....	427.3	30.7	35.5	37.6	38.7	34.3	32.1	38.8	32.7	32.6	42.7	36.4	35.1
In inedible products.....	.....do.....	165.7	16.2	15.4	16.5	13.7	16.3	13.8	14.4	11.8	10.5	10.9	13.3	13.1
Stocks ³.....	.....do.....	33.3	33.3	42.2	30.7	32.6	35.1	37.9	41.7	49.0	41.3	44.1	40.0	53.1
COCONUT OIL														
Production:														
Refined oil ¹	Mil. of lb.....	650.1	50.7	52.9	52.0	57.2	62.6	49.3	55.4	56.5	54.7	51.3	49.5	58.0
Consumption:														
Crude in refining.....	.....do.....	673.3	53.6	54.8	53.6	59.1	63.1	50.7	56.8	58.8	57.1	53.0	51.7	61.1
In end products ².....	.....do.....	875.4	66.4	76.2	75.8	77.4	70.6	65.2	74.8	78.7	70.7	76.5	70.6	72.5
In edible products.....	.....do.....	176.3	14.2	14.3	15.4	15.5	15.9	13.1	16.9	16.2	13.3	13.1	14.5	14.1
Baking and frying fats.....	.....do.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In inedible products.....	.....do.....	699.1	52.3	61.9	60.4	61.9	54.7	52.1	58.0	62.5	57.3	63.5	56.1	58.4
Soap.....	.....do.....	121.7	9.8	9.1	12.3	11.0	8.8	9.6	10.2	10.0	9.6	10.4	9.7	11.4
Resins and plastics.....	.....do.....	3.2	0.3	0.3	0.5	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2
Stocks ³ :														
Crude oil.....	.....do.....	301.8	301.8	227.9	184.7	157.6	150.0	107.1	140.1	129.5	157.3	196.7	218.2	220.2
Refined oil ².....	.....do.....	53.9	53.9	50.9	40.4	30.1	37.1	34.0	38.2	44.2	53.9	43.0	55.9	46.1
VEGETABLE OIL FOODS														
Production.....	Mil. of lb.....	313.4	24.4	23.0	28.0	28.6	29.4	26.2	26.5	27.6	26.0	26.8	21.9	25.1
Consumption:														
In end products ².....	.....do.....	134.9	11.3	9.7	11.6	12.2	12.2	12.7	9.0	11.3	11.5	13.3	9.0	11.2
In inedible products.....	.....do.....	134.9	11.3	9.7	11.6	12.2	12.2	12.7	9.0	11.3	11.5	13.3	9.0	11.2
Feed.....	.....do.....	120.2	9.9	8.8	10.3	11.0	11.0	11.6	8.0	10.1	10.4	12.0	7.4	9.6
Other inedible products.....	.....do.....	14.7	1.3	0.8	1.3	1.2	1.2	1.1	1.0	1.2	1.2	1.3	1.6	1.6
Stocks ³.....	.....do.....	13.5	13.5	15.3	15.0	16.0	13.7	11.6	13.7	13.5	14.4	14.1	12.4	11.6
CASTOR OIL														
Production.....	Mil. of lb.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Consumption:														
In end products ².....	.....do.....	41.3	3.1	3.3	4.7	3.0	3.7	3.2	3.6	3.5	2.8	3.5	2.9	3.9
In inedible products.....	.....do.....	41.3	3.1	3.3	4.7	3.0	3.7	3.2	3.6	3.5	2.8	3.5	2.9	3.9
Resins and plastics.....	.....do.....	3.3	0.1	0.4	0.2	0.3	0.4	0.4	0.4	0.2	0.3	0.2	0.4	0.2
Lubricants.....	.....do.....	3.5	(D)	(D)	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.4
Stocks ³.....	.....do.....	4.1	4.1	5.4	7.2	11.4	16.1	20.4	13.0	19.4	21.5	17.3	23.5	20.4
TALL OIL														
Production:														
Crude oil.....	Mil. of lb.....	1,506.7	122.7	114.7	120.2	119.7	129.9	130.6	129.8	121.9	133.2	131.2	121.5	131.4
Refined oil ⁴.....	.....do.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Consumption:														
Crude in refining.....	.....do.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In end products ².....	.....do.....	883.5	69.2	63.8	78.9	77.1	78.4	71.5	74.8	77.8	67.6	73.2	73.5	77.8
In inedible products.....	.....do.....	883.5	69.2	63.8	78.9	77.1	78.4	71.5	74.8	77.8	67.6	73.2	73.5	77.8
Resins and plastics.....	.....do.....	19.4	1.4	1.6	1.5	2.2	2.4	1.9	1.5	1.3	1.4	1.5	1.3	1.6
Lubricants.....	.....do.....	7.0	0.5	0.5	0.7	0.5	0.6	0.7	0.7	0.6	0.5	0.8	0.5	0.6
Fatty acids.....	.....do.....	841.8	66.1	60.4	75.5	73.1	74.1	68.0	71.4	74.6	64.7	69.8	70.2	73.8
Stocks ³ :														
Crude oil.....	.....do.....	137.8	137.8	143.7	167.5	173.3	186.1	190.7	161.0	158.4	156.9	163.2	163.1	153.9
Refined oil.....	.....do.....	14.1	14.1	13.8	18.1	17.4	28.4	15.9	15.2	16.1	13.5	36.2	35.7	35.0
INEDIBLE TALLOW AND GREASE														
Production.....	Mil. of lb.....	5,767.8	481.2	471.5	487.7	505.4	477.5	497.9	492.4	471.2	458.3	487.7	437.1	499.9
Inedible tallow.....	.....do.....	3,535.8	288.7	287.5	295.0	304.7	284.1	293.2	308.6	299.6	273.9	303.0	281.4	316.2
Grease.....	.....do.....	2,211.6	190.7	182.3	190.9	199.2	191.0	203.5	182.6	170.6	183.3	183.9	154.1	179.7
Inedible tallow and grease n.s.k.....	.....do.....	20.5	1.9	1.8	1.8	1.5	2.4	1.3	1.3	1.0	1.2	0.8	1.6	4.0

See footnotes at end of table.

Table 13. PRODUCTION, CONSUMPTION, SHIPMENTS AND TRANSFERS, AND STOCKS OF MAJOR CRUDE AND REFINED ANIMAL AND VEGETABLE FATS AND OILS: 1992—Continued

Product description	Unit of measure	Total	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Feb.	Jan.
Consumption:														
In end products ² .....	.....do	3,050.1	251.6	250.9	265.5	239.1	244.1	267.1	249.7	259.1	257.7	255.2	240.6	269.4
In inedible products .....	.....do	3,050.1	251.6	250.9	265.5	239.1	244.1	267.1	249.7	259.1	257.7	255.2	240.6	269.4
Soap .....	.....do	334.4	18.9	29.6	32.4	30.8	25.5	24.3	29.3	25.2	26.7	32.0	28.0	31.8
Feed .....	.....do	1,954.4	171.6	160.1	173.6	157.3	164.6	175.4	167.6	158.0	160.1	156.3	141.5	168.4
Lubricants .....	.....do	63.2	5.7	5.3	5.2	5.6	5.1	5.5	5.6	4.6	5.4	4.5	5.5	5.2
Fatty acids .....	.....do	659.0	51.6	53.1	50.1	43.2	45.4	58.1	44.1	68.5	61.1	60.6	62.6	60.6
Other inedible products .....	.....do	39.1	3.7	2.9	4.2	2.3	3.5	3.9	3.1	2.8	4.4	1.8	3.0	3.4
Stocks³:														
Inedible tallow .....	.....do	219.2	219.2	234.1	233.4	248.2	304.4	275.7	304.5	255.1	289.0	302.9	383.2	319.3
Grease .....	.....do	85.5	85.5	110.4	109.8	96.2	91.6	83.7	94.7	78.1	88.1	92.6	84.6	82.6
Inedible tallow and grease n.s.k. ....	.....do	3.8	3.8	5.1	3.9	3.6	3.7	3.7	4.7	6.3	7.5	6.9	8.2	8.6
PALM OIL														
Production:														
Refined oil ¹	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Consumption:														
Crude in refining .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In end products ² .....	.....do	220.5	14.5	14.3	25.0	22.3	21.5	19.2	18.8	17.4	17.2	17.5	16.1	16.8
In edible products .....	.....do	108.1	6.1	5.6	15.1	12.5	11.6	9.3	9.2	8.1	8.7	7.1	7.1	7.9
In inedible products .....	.....do	112.4	8.4	8.7	9.9	9.9	9.9	9.9	9.6	9.3	8.4	10.4	9.0	8.9
Stocks³:														
Crude oil .....	.....do	14.4	14.4	14.7	12.8	19.1	16.0	12.2	15.0	7.5	11.3	9.4	9.5	12.8
Refined oil .....	.....do	22.8	22.8	28.7	26.5	25.2	22.1	20.1	23.7	30.4	32.5	29.2	34.2	22.1
PALM KERNEL OIL														
Production														
Refined oil ¹	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Consumption:														
Crude refining .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In end products ² .....	.....do	223.4	14.4	18.8	18.6	19.1	22.9	18.0	19.1	19.2	16.8	16.9	18.7	21.0
In edible products .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In inedible products .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks³:	.....do	76.1	76.1	87.3	59.6	48.0	46.1	46.0	62.1	67.8	90.6	91.9	84.5	64.2
TUNG OIL														
Consumption:														
In end products ²	Mil. of lb.	7.3	0.8	0.5	0.9	0.7	0.7	0.6	0.7	0.5	0.5	0.6	0.5	0.4
In inedible products .....	.....do	7.3	0.8	0.5	0.9	0.7	0.7	0.6	0.7	0.5	0.5	0.6	0.5	0.4
Paint and varnish .....	.....do	0.8	0.1	-	0.1	0.1	0.1	0.1	0.1	-	0.1	0.1	0.1	0.1
Resins and plastics .....	.....do	4.8	0.6	0.4	0.7	0.4	0.5	0.3	0.4	0.4	0.3	0.3	0.2	0.2
Other inedible products .....	.....do	1.7	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1
Stocks³:	.....do	3.1	3.1	3.6	2.6	1.7	2.2	1.4	0.9	1.5	1.3	1.6	2.4	2.4
FISH OIL														
Consumption:														
In end products ²	Mil. of lb.	18.2	1.0	1.1	2.0	1.9	1.6	1.5	1.7	1.3	1.5	1.7	1.4	1.6
In inedible products .....	.....do	18.2	1.0	1.1	2.0	1.9	1.6	1.5	1.7	1.3	1.5	1.7	1.4	1.6
Lubricants .....	.....do	7.5	0.4	0.7	1.1	1.0	0.5	0.5	0.7	0.6	0.6	0.5	0.6	0.2
OTHER OILS														
Consumption:														
In end products ²	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In edible products .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
In inedible products .....	.....do	54.8	2.5	2.9	3.8	4.3	4.6	4.8	4.4	5.3	6.0	5.5	4.0	6.7
Stocks³:	.....do	7.0	7.0	5.5	5.7	8.4	5.9	6.9	8.9	8.3	7.7	9.4	6.1	5.3

Note: Detail may not add due to independent rounding.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. n.s.k. Not specified by kind.

¹Production of refined oils covers only once-refined oils. Degummed soybean oil is reported as crude oil.²Includes hydrogenated fats (vegetable and animal) and other fats and oils in process (for example, refined cottonseed includes stocks of stearin).³Calculated at the end of the period.⁴The production of refined tall oil and distilled tall oil containing less than 90 percent free fatty acids, not including resin acids.

Table 14. NET RECEIPTS, CRUSHINGS, AND STOCKS OF COTTONSEED AND SOYBEANS AT OIL MILLS, BY SELECTED STATES: 1992

[Thousands of short tons]

State	Total	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Feb.	Jan.
Cottonseed													
Receipts at mills	3,607.8	617.1	1,020.2	1,303.6	226.7	75.2	-29.8	-14.8	-33.5	-32.0	19.0	124.2	331.7
Crushed or used	3,742.9	372.1	353.3	323.2	162.9	245.7	270.2	292.1	245.4	297.8	381.3	378.3	420.6
Stocks ¹	2,245.3	2,245.3	2,000.4	1,333.5	353.1	289.4	459.9	759.8	1,066.6	1,345.5	1,875.3	2,037.5	2,291.6
Arkansas:													
Crushed or used	462.0	46.8	43.2	46.1	13.7	17.1	32.8	38.9	41.8	46.6	44.0	44.6	46.6
Stocks ¹	376.0	376.0	341.0	228.0	25.1	18.9	52.5	120.8	180.7	246.2	313.4	354.0	356.4
Pacific and mountain states:													
Crushed or used	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks ¹	298.6	298.6	282.7	169.6	16.8	11.0	24.8	49.2	71.8	106.0	151.5	207.0	(D)
Mississippi:													
Crushed or used	494.3	52.5	50.8	56.0	25.0	(D)	43.8	(D)	17.7	41.0	51.4	39.9	54.3
Stocks ¹	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	233.8	284.9
Texas:													
Crushed or used	1,325.1	112.0	108.6	85.1	80.9	112.8	91.9	111.9	89.2	121.2	133.2	134.1	144.2
Stocks ¹	564.2	564.2	404.0	223.1	217.1	171.0	165.5	256.3	372.1	472.4	589.7	723.8	869.0
Soybeans													
Receipts at mills	37,740.4	2,938.0	3,546.2	5,995.6	3,113.3	2,698.9	2,783.1	2,763.2	2,669.5	2,599.5	2,767.0	2,670.5	3,195.7
Crushed or used	37,973.1	3,486.0	3,393.7	3,416.1	3,037.0	3,070.2	3,068.7	2,998.8	2,857.1	3,046.8	3,214.9	3,022.6	3,361.2
Stocks ¹	3,573.8	3,573.8	4,121.9	3,969.4	1,390.0	1,313.6	1,684.8	1,970.4	2,205.9	2,393.6	2,841.0	3,288.9	3,641.0
Arkansas:													
Receipts at mills	1,257.7	124.7	147.0	247.9	54.7	(D)	(D)	(D)	(D)	(D)	9.8	215.2	179.0
Crushed or used	1,322.4	123.2	118.4	100.4	121.3	(D)	(D)	(D)	(D)	(D)	117.5	108.0	115.8
Stocks ¹	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Georgia:													
Receipts at mills	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Crushed or used	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks ¹	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Illinois:													
Receipts at mills	7,396.2	523.1	524.3	1,067.5	808.2	554.7	592.1	608.9	526.1	487.3	498.8	503.5	701.7
Crushed or used	7,385.7	635.0	645.4	669.3	652.6	603.1	591.9	610.9	573.4	560.9	609.3	589.3	644.6
Stocks ¹	591.7	591.7	703.5	824.7	426.5	270.9	319.3	319.1	321.0	368.3	441.9	552.4	639.2
Indiana:													
Receipts at mills	2,625.3	198.9	110.6	659.9	220.0	193.9	204.2	200.9	188.9	140.5	195.8	128.5	183.2
Crushed or used	2,537.1	229.7	216.0	236.5	199.9	203.3	200.4	216.9	226.6	171.7	216.0	198.4	221.7
Stocks ¹	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Iowa:													
Receipts at mills	6,845.6	529.9	586.2	949.9	560.5	578.0	560.6	468.4	483.8	488.3	566.5	471.4	602.1
Crushed or used	6,878.8	643.4	612.5	618.4	558.6	600.3	571.6	509.9	474.0	564.0	568.4	545.2	612.5
Stocks ¹	375.3	375.3	488.8	515.0	183.5	181.6	203.9	214.8	256.3	246.5	322.1	324.0	397.8
Kansas:													
Receipts at mills	1,535.4	125.7	110.4	241.1	184.8	(D)	83.4	111.7	107.3	127.9	115.5	98.0	132.4
Crushed or used	1,566.3	165.3	148.2	155.8	123.8	(D)	(D)	104.5	112.5	133.9	138.6	131.2	142.3
Stocks ¹	104.4	104.4	144.0	(D)	(D)	(D)	64.0	65.1	58.0	63.2	69.2	92.3	125.5
Minnesota:													
Receipts at mills	2,639.9	219.4	201.4	276.6	232.2	221.0	235.1	222.1	212.3	191.3	195.8	201.5	231.2
Crushed or used	2,622.1	221.0	218.8	223.5	220.7	232.1	233.9	220.6	216.2	210.0	213.2	193.3	218.8
Stocks ¹	(D)	(D)	(D)	99.9	(D)	(D)	(D)	(D)	(D)	(D)	66.2	83.6	75.4
Missouri:													
Receipts at mills	2,321.5	193.4	143.8	374.9	114.5	206.6	187.7	178.8	163.3	166.0	194.5	175.1	222.9
Crushed or used	2,283.6	210.7	208.7	212.2	150.6	182.0	187.2	187.1	172.5	196.9	191.8	180.7	203.2
Stocks ¹	121.5	121.5	138.8	203.7	41.0	77.1	52.6	52.0	60.4	69.6	100.6	97.9	103.5
Ohio:													
Receipts at mills	2,453.4	166.5	206.4	476.1	228.3	222.7	153.8	176.3	152.6	209.1	193.6	175.8	92.2
Crushed or used	2,542.1	235.1	225.4	236.4	221.8	228.0	204.4	194.8	165.5	203.2	210.6	202.6	214.3
Stocks ¹	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
South Carolina:													
Receipts at mills	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Crushed or used	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks ¹	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

¹ Calculated at the end of the period.

Table 15. PRODUCTION AND STOCKS OF COTTONSEED AND SOYBEANS, BY SELECTED STATES: 1992

State	Unit of measure	Total	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Feb.	Jan.
COTTONSEED														
Production:														
Crude oil	Mil. of lb.	1,207.9	117.6	110.2	99.5	56.8	77.8	91.3	91.8	79.3	97.5	121.5	127.2	137.4
Cake and meal	Mil. of s. tons	1,685.8	160.5	150.2	143.7	76.0	111.2	127.8	129.9	111.7	138.2	173.5	170.5	192.6
Hulls .....	.....do	1,016.5	111.9	100.1	87.5	43.4	68.6	73.2	76.7	61.0	76.8	104.8	102.0	110.5
Linters ¹	Thous. of bales ..	944.6	98.0	93.7	84.1	42.1	57.1	63.8	63.5	62.5	70.9	99.0	100.4	109.5
Stocks:														
Crude oil	Mil. of lb.	23.1	23.1	25.3	22.0	14.1	18.0	20.5	35.5	38.4	42.8	37.4	36.1	41.5
Cake and meal	Mil. of s. tons	49.6	49.6	66.1	61.5	42.7	58.4	58.8	70.1	68.0	73.1	76.1	59.9	43.7
Hulls .....	.....do	37.0	37.0	27.9	17.0	13.8	36.5	35.5	29.3	23.1	38.1	47.0	49.8	46.5
Linters ¹	Thous. of bales ..	100.6	100.6	99.1	99.8	89.9	109.4	115.4	123.5	126.3	115.5	111.2	102.7	80.7
Arkansas:														
Production:														
Crude oil	Mil. of lb.	148.7	13.8	13.5	14.5	4.8	5.6	11.8	12.4	13.6	15.2	14.0	14.3	15.2
Cake and meal	Mil. of s. tons	205.9	19.7	17.9	20.2	6.7	8.0	14.9	17.6	18.7	21.1	19.9	20.1	21.1
Hulls .....	.....do	115.6	12.7	11.3	11.3	3.2	4.5	8.5	9.4	10.0	11.3	11.1	11.0	11.3
Linters ¹	Thous. of bales ..	116.6	14.5	11.5	11.9	3.4	3.7	8.1	9.8	10.5	11.0	10.6	10.4	11.2
Stocks:														
Crude oil	Mil. of lb.	2.2	2.2	2.3	3.3	0.8	0.5	2.2	1.8	2.3	2.3	3.1	2.5	1.7
Cake and meal	Mil. of s. tons	2.2	2.2	5.3	3.1	0.9	3.2	1.8	4.9	4.5	4.6	5.0	4.0	1.7
Hulls .....	.....do	4.8	4.8	4.3	2.7	1.5	4.4	4.5	4.9	3.7	6.0	5.1	5.3	3.3
Linters ¹	Thous. of bales ..	9.9	9.9	7.8	6.6	1.4	6.7	9.6	10.7	10.1	7.5	6.4	5.5	3.8
California:														
Production:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Hulls .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Linters ¹	Thous. of bales ..	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Hulls .....	.....do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Linters ¹	Thous. of bales ..	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Mississippi:														
Production:														
Crude oil	Mil. of lb.	153.0	14.6	14.0	16.0	(D)	(D)	14.0	13.4	5.4	(D)	15.0	13.2	19.6
Cake and meal	Mil. of s. tons	226.2	22.6	21.4	26.5	(D)	(D)	22.0	19.0	8.0	(D)	23.1	18.1	23.2
Hulls .....	.....do	128.9	16.8	14.6	14.2	(D)	(D)	10.8	9.9	3.9	(D)	13.4	11.5	11.7
Linters ¹	Thous. of bales ..	146.1	16.5	15.3	13.0	(D)	(D)	11.7	7.9	9.9	(D)	13.8	12.1	19.1
Stocks:														
Crude oil	Mil. of lb.	(D)	(D)	4.1	(D)	(D)	(D)	2.8	2.5	2.1	(D)	6.6	(D)	4.2
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	(D)	(D)	4.5	4.2	(D)	(D)	4.8	2.6	2.5
Hulls .....	.....do	2.4	2.4	(D)	(D)	(D)	(D)	1.1	1.2	0.6	(D)	1.2	1.6	2.5
Linters ¹	Thous. of bales ..	(D)	(D)	(D)	(D)	(D)	(D)	4.8	6.2	6.3	(D)	6.2	6.1	6.6
Texas:														
Production:														
Crude oil	Mil. of lb.	424.9	35.9	34.5	26.3	29.1	34.0	31.4	34.6	28.0	39.0	42.2	43.1	46.8
Cake and meal	Mil. of s. tons	578.9	47.6	46.7	36.1	35.2	47.9	41.3	47.3	39.5	53.6	59.5	59.4	64.8
Hulls .....	.....do	393.3	34.3	31.6	25.4	20.4	34.7	29.2	34.7	24.0	35.6	41.8	39.0	42.6
Linters ¹	Thous. of bales ..	319.2	30.8	28.8	22.6	18.7	25.1	21.6	24.6	20.5	28.9	32.1	31.5	34.0
Stocks:														
Crude oil	Mil. of lb.	5.0	5.0	7.7	6.6	(D)	7.4	(D)	9.7	(D)	(D)	4.1	6.7	(D)
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	(D)	(D)	(D)	23.9	22.0	25.9	17.6	12.3	15.9
Hulls .....	.....do	7.1	7.1	(D)	5.2	(D)	(D)	19.6	12.7	5.7	(D)	14.0	13.6	13.4
Linters ¹	Thous. of bales ..	68.3	68.3	69.3	71.0	72.9	82.7	78.9	78.8	76.3	70.8	62.2	54.1	41.2
SOYBEANS														
Production:														
Crude oil	Mil. of lb.	14,249.6	1,238.6	1,200.3	1,238.0	1,157.7	1,178.6	1,176.6	1,151.6	1,095.6	1,167.3	1,228.4	1,147.0	1,270.0
Cake and meal	Mil. of s. tons	30,127.3	2,768.0	2,702.0	2,703.3	2,402.2	2,433.7	2,439.1	2,377.5	2,267.2	2,415.8	2,549.5	2,398.7	2,670.3
Stocks:														
Crude oil	Mil. of lb.	1,060.3	1,060.3	996.0	995.7	1,047.2	1,125.4	1,127.4	1,121.9	1,155.8	1,175.1	1,159.1	1,128.0	1,011.9
Cake and meal	Mil. of s. tons	360.8	360.8	411.3	307.9	229.9	290.9	260.5	274.7	310.2	310.4	315.6	291.3	258.3

See footnotes at end of table.

Table 15. PRODUCTION AND STOCKS OF COTTONSEED AND SOYBEANS, BY SELECTED STATES: 1992—Continued

State	Unit of measure	Total	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Feb.	Jan.
Arkansas:														
Production:														
Crude oil	Mil. of lb.	484.8	45.0	43.1	38.7	44.8	(D)	44.3	42.7	(D)	(D)	43.1	39.3	42.1
Cake and meal	Mil. of s. tons	1,058.9	97.9	94.2	80.1	98.8	(D)	97.8	94.1	(D)	(D)	93.9	87.1	93.4
Stocks:														
Crude oil	Mil. of lb.	33.5	33.5	28.8	22.7	28.4	19.7	18.2	17.8	17.9	18.7	18.9	20.0	15.5
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	10.9	8.8	11.4	(D)	7.5	10.7	(D)	9.7	(D)	(D)
Georgia:														
Production:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Illinois:														
Production:														
Crude oil	Mil. of lb.	2,816.4	229.2	234.4	247.7	251.0	233.6	229.9	237.9	224.1	220.0	236.1	226.2	246.3
Cake and meal	Mil. of s. tons	5,819.5	499.3	511.0	526.3	513.9	477.4	466.4	480.6	450.3	440.7	479.9	464.2	509.5
Stocks:														
Crude oil	Mil. of lb.	268.6	268.6	274.2	269.3	310.8	346.5	378.0	353.6	384.7	(D)	(D)	395.4	335.3
Cake and meal	Mil. of s. tons	149.3	149.3	135.7	84.1	(D)	(D)	(D)	115.2	96.0	108.3	103.1	64.4	105.5
Indiana:														
Production:														
Crude oil	Mil. of lb.	954.1	81.7	76.7	81.7	75.3	79.9	77.5	84.3	87.4	66.1	83.0	76.2	84.3
Cake and meal	Mil. of s. tons	1,992.6	182.4	170.8	182.5	157.3	158.6	158.9	171.4	178.3	136.7	168.1	153.8	173.8
Stocks:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	194.1	187.6	198.1	205.9	214.8	192.0	189.3	(D)	(D)
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Iowa:														
Production:														
Crude oil	Mil. of lb.	2,577.2	223.3	211.7	219.7	214.1	232.5	215.3	197.5	181.7	217.7	219.7	209.4	234.6
Cake and meal	Mil. of s. tons	5,459.8	514.9	489.9	493.9	441.5	472.8	452.5	403.8	374.5	448.1	449.0	432.8	486.1
Stocks:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons	23.1	23.1	31.5	29.5	15.8	27.0	23.3	18.9	30.3	22.3	24.7	23.4	21.8
Kansas:														
Production:														
Crude oil	Mil. of lb.	594.5	60.7	54.7	57.6	47.0	(D)	(D)	(D)	(D)	51.3	52.9	50.2	54.2
Cake and meal	Mil. of s. tons	1,257.8	131.6	118.6	124.2	99.5	(D)	(D)	(D)	(D)	107.5	111.9	105.5	114.8
Stocks:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons	5.2	5.2	5.0	8.0	4.2	8.0	4.9	6.9	8.1	10.1	7.8	(D)	5.0
Minnesota:														
Production:														
Crude oil	Mil. of lb.	964.0	75.7	67.3	77.9	82.6	88.8	88.3	84.6	82.9	79.4	80.7	73.6	82.2
Cake and meal	Mil. of s. tons	2,103.7	178.7	176.5	181.0	175.9	186.3	186.6	175.5	174.4	166.6	171.8	154.9	175.5
Stocks:														
Crude oil	Mil. of lb.	53.8	53.8	49.7	44.1	53.4	59.9	46.7	50.6	49.1	50.4	62.5	56.0	62.7
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	6.6	22.5	13.3	11.3	17.0	14.9	19.3	(D)	(D)
Missouri:														
Production:														
Crude oil	Mil. of lb.	871.1	77.0	76.0	79.4	56.7	70.3	73.3	72.4	67.1	76.6	74.4	69.9	78.0
Cake and meal	Mil. of s. tons	1,816.5	166.3	166.2	167.9	119.7	145.6	148.8	149.9	139.1	156.4	152.6	143.3	160.7
Stocks:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons	5.4	5.4	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Ohio:														
Production:														
Crude oil	Mil. of lb.	945.7	80.4	77.4	80.9	83.3	87.4	79.5	75.7	63.6	78.3	80.8	76.7	81.7
Cake and meal	Mil. of s. tons	2,005.9	183.9	178.3	185.5	174.4	179.7	161.6	151.4	129.5	160.7	168.3	162.5	170.1
Stocks:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
South Carolina:														
Production:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Stocks:														
Crude oil	Mil. of lb.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Cake and meal	Mil. of s. tons	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

¹Includes first cut, second cut, and mill run. Linter bales vary in weight according to kind of cut: First cut, 626 lb.; second cut, 634 lb.; and mill run, 622 lb.

Table 16. PRODUCTION AND STOCKS OF FATS AND OILS PRODUCTS: 1992

[Millions of pounds]

Product description	Total	Dec.	Nov.	Oct.	Sep.	Aug.	July	June	May	April	March	Feb.	Jan.
Baking and frying fats:													
Vegetable oil:													
Production	4,988.0	409.0	436.5	464.8	443.0	415.4	399.5	411.7	404.2	413.6	426.7	370.2	393.5
Stocks ¹	90.4	90.4	98.5	117.5	120.2	119.9	107.9	101.6	93.5	89.9	97.7	101.3	98.5
Animal fats or blends:													
Production	730.7	51.0	62.5	68.9	70.7	60.0	60.8	63.3	55.8	58.5	66.2	56.6	56.4
Stocks ¹	11.1	11.1	11.2	10.8	11.4	12.2	10.9	11.1	9.5	9.3	9.2	9.9	8.6
Soybean salad and cooking oils:													
Production	4,905.5	371.3	366.9	439.4	418.6	396.2	427.7	433.8	447.6	408.3	445.8	375.9	374.1
Stocks ¹	62.6	62.6	61.8	64.8	59.6	63.9	63.3	65.0	73.0	63.0	64.6	80.3	65.3
Other salad and cooking oils:													
Production	1,585.8	137.3	139.7	146.9	151.6	136.5	132.7	130.9	131.3	120.7	128.4	116.7	113.0
Stocks ¹	37.5	37.5	44.7	49.1	42.6	44.1	33.5	26.7	33.1	33.3	31.6	41.4	36.1
Margarine:													
Production	2,817.3	270.5	253.0	267.3	258.7	216.1	198.0	233.4	198.2	221.8	261.3	216.2	223.0
Stocks ¹	74.9	74.9	84.2	100.9	80.0	86.5	86.0	81.0	79.8	64.6	80.5	77.1	74.3
Glycerine crude:													
Production	311.8	24.9	25.0	28.2	27.5	25.7	26.9	28.2	23.0	26.0	28.6	22.7	25.1
Used in refining	350.8	32.5	27.0	32.7	30.1	27.6	32.3	30.8	24.4	27.2	29.2	29.1	27.9
Stocks ¹	32.1	32.1	20.5	24.0	26.0	27.5	24.8	31.4	31.5	30.3	31.4	26.3	25.9
Glycerine refined:													
Production	346.3	32.0	26.7	32.0	29.7	27.2	31.9	30.4	24.0	26.9	28.9	29.0	27.5
Stocks ¹	19.8	19.8	22.5	21.8	19.6	17.5	17.3	12.7	15.8	16.2	15.5	19.7	18.5
Fatty acids:													
Production	1,505.9	90.3	111.5	120.1	117.1	124.6	123.0	115.1	148.9	137.7	146.0	132.4	139.2
Stocks ¹	146.2	146.2	144.7	134.1	137.4	154.6	157.3	174.3	161.8	160.7	170.0	140.2	135.0
Meat meal and tannage:													
Production	5,226.3	434.9	420.5	431.5	448.3	419.5	445.3	451.0	436.9	416.1	448.1	409.5	464.7
Meat and bone meal ..	3,980.2	322.7	318.6	327.9	338.7	322.5	347.3	344.3	331.0	323.2	339.0	308.6	356.5
Dry rendered tannage ..	1,241.2	111.4	100.9	102.6	109.2	96.9	97.9	106.5	105.6	92.6	109.0	100.8	107.8
Meat and bone meal n.s.k.	4.9	0.8	0.9	1.0	0.4	-	0.2	0.3	0.3	0.3	0.1	0.1	0.5
Stocks ¹ :													
Meat and bone meal ..	51.8	51.8	64.1	57.8	46.5	43.3	53.3	45.0	46.6	45.7	47.4	45.9	50.5
Dry rendered tannage ..	10.1	10.1	9.3	9.7	7.9	8.8	11.7	15.4	15.6	17.2	17.7	15.9	16.7
All other products:													
Production	1,893.0	129.9	138.2	158.1	181.8	149.3	165.6	169.5	161.4	167.1	170.5	151.9	149.8
Stocks ¹	25.1	25.1	18.1	26.1	27.6	22.6	21.1	24.8	20.6	22.2	24.9	21.9	23.0

Note: Detailed figures may not add due to independent rounding.

- Represents zero. n.s.k. Not specified by kind.

¹Includes only stocks located at producer plants and warehouses. Information on stocks held by consumers is not collected.

Table 17A. SELECTED FATS AND OILS CONSUMED IN END PRODUCTS: 1991

[Millions of pounds]

Product description	Total all fats and oils	Cotton- seed	Soybean	Corn	Peanut	Safflower seed	Coconut	Linseed	Sunflower	Tall	
Total	20,751.7	(D)	11,471.6	(D)	182.1	34.2	875.4	154.4	149.5	883.5	
Consumption in edible products	14,847.4	678.8	11,168.7	1,084.5	(D)	(D)	176.3	-	143.7	-	
Baking and frying fats	5,760.5	241.2	4,140.2	322.2	(D)	-	(D)	-	20.4	-	
Salad or cooking oil	6,546.0	373.9	4,931.1	586.3	171.4	(D)	36.8	-	123.3	-	
Margarine	2,174.0	24.0	1,925.8	176.0	-	(D)	(D)	-	-	-	
Other edible products	366.9	39.8	171.5	-	(D)	(D)	(D)	-	-	-	
Consumption in inedible products	5,904.4	(D)	302.8	(D)	(D)	(D)	699.1	154.4	5.7	883.5	
Soap	738.8	8.4	(D)	-	-	-	121.7	-	-	(D)	
Paint and varnish	123.8	-	43.5	-	-	(D)	(D)	69.0	-	(D)	
Feed	2,176.5	13.3	22.3	-	-	-	-	-	-	-	
Resins and plastics	165.5	-	94.0	-	-	(D)	(D)	31.3	4.0	19.4	
Lubricants	109.4	0.3	5.9	(D)	-	-	(D)	(D)	-	7.0	
Fatty acids	2,041.2	-	(D)	-	-	-	(D)	(D)	1.1	841.8	
Other inedible products	549.3	0.3	69.8	(D)	(D)	(D)	(D)	(D)	0.6	11.4	
	Castor	Tung	Palm	Palm kernel	Fish	Lard ¹	Edible tallow ¹	Inedible tallow	Veg- etable oil foots	Rape- seed	Other fats and oils
Total	41.3	7.3	220.5	223.4	18.2	479.7	595.0	3,050.1	134.9	(D)	(D)
Consumption in edible products	-	-	108.1	(D)	-	345.0	429.3	-	-	360.5	(D)
Baking and frying fats	-	-	(D)	(D)	-	310.4	427.3	-	-	77.9	-
Salad or cooking oil	-	-	4.0	(D)	-	-	-	-	-	(D)	(D)
Margarine	-	-	(D)	-	-	(D)	(D)	-	-	(D)	-
Other edible products	-	-	(D)	(D)	-	(D)	(D)	-	-	-	(D)
Consumption in inedible products	41.3	7.3	112.4	(D)	18.2	134.8	165.7	3,050.1	134.9	(D)	54.8
Soap	(D)	-	(D)	(D)	-	-	(D)	334.4	(D)	-	-
Paint and varnish	(D)	0.8	-	-	(D)	-	-	-	-	-	(D)
Feed	-	-	(D)	-	-	(D)	(D)	1,954.4	120.2	(D)	21.4
Resins and plastics	3.3	4.8	-	-	(D)	-	(D)	-	-	-	3.1
Lubricants	3.5	-	(D)	-	7.5	10.9	(D)	63.2	(D)	(D)	5.4
Fatty acids	-	-	40.6	(D)	(D)	(D)	(D)	659.0	(D)	(D)	(D)
Other inedible products	28.4	1.7	3.6	(D)	(D)	13.5	(D)	39.1	(D)	(D)	(D)

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

¹Includes 36.6 million pounds of lard and edible tallow consumed in margarine for 1992.

Table 17B. TOTAL CONSUMPTION IN EDIBLE AND INEDIBLE PRODUCTS: 1992

[Millions of pounds]

Product description	Total	Dec.	Nov.	Oct.	Sep.	Aug.	July	June	May	April	March	Feb.	Jan.
Consumption in edible products ¹	14,847.3	1,222.5	1,237.1	1,374.1	1,337.7	1,214.7	1,204.9	1,256.6	1,224.6	1,206.4	1,306.5	1,119.5	1,142.7
Baking or frying fats	5,760.5	461.6	502.2	538.7	527.3	479.3	460.7	478.5	462.4	473.1	495.5	429.4	452.0
Salad or cooking oil	6,546.0	515.1	510.3	591.3	577.6	538.1	566.1	569.6	580.1	532.9	579.5	495.4	490.0
Margarine	2,174.0	211.9	193.8	203.6	196.3	164.6	149.3	177.9	154.4	173.1	204.0	168.2	176.9
Other edible products ² ..	366.9	33.8	31.0	40.6	36.5	32.7	28.7	30.7	27.7	27.2	27.5	26.6	23.8
Consumption in inedible products ¹	5,904.4	467.4	470.7	513.3	483.6	491.4	504.9	483.9	508.1	489.2	498.9	477.0	516.1
Soap	738.8	53.2	63.6	68.8	64.4	60.1	58.1	63.2	57.3	58.1	64.1	59.7	68.2
Paint and varnish	123.8	7.7	5.9	10.5	9.0	10.5	13.5	9.3	10.7	15.9	8.5	11.8	10.5
Feed	2,176.5	189.7	177.6	193.3	176.8	182.5	193.5	182.5	175.0	177.7	174.4	162.4	191.2
Resins and plastics	165.5	10.1	10.2	12.7	14.7	16.1	15.7	14.5	13.8	13.7	15.1	13.5	15.5
Lubricants	109.4	9.1	8.8	9.6	10.0	8.9	9.3	9.9	8.5	9.6	8.6	8.8	8.3
Fatty acids	2,041.2	155.3	162.3	173.0	163.4	163.9	171.7	159.0	192.3	168.9	180.9	175.4	175.3
Other inedible products ..	549.3	42.2	42.3	45.4	45.3	49.5	43.1	45.6	50.6	45.3	47.3	45.3	47.2

Note: Detailed figures may not add to total due to independent rounding.

¹Includes hydrogenated fats (vegetable and animal) and other fats and oils in process.²Includes confectioner's fats.

Table 18. SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF ANIMAL AND VEGETABLE FATS AND OILS: 1992

[Quantity in millions of kilograms]

Product description	Manufacturers' production	Exports of domestic merchandise ¹	Percent exports to manufacturers' production	Imports for consumption ²	Apparent consumption ³
Cottonseed:					
Crude	547.9	5.5	-	7.7	550.1
Refined	453.2	88.5	0.2	5.0	369.7
Soybean:					
Crude	6,463.6	562.1	0.1	-	5,901.5
Refined	5,379.5	21.6	-	-	5,357.9
Corn oil (crude and refined)	1,333.5	167.4	0.1	16.8	1,182.9
Peanut:					
Crude	173.0	139.0	0.8	-	34.0
Refined	82.1	2.0	-	1.0	81.1
Edible tallow	692.6	149.4	0.2	0.7	543.9
Inedible tallow	2,616.3	1,032.0	0.4	20.2	1,604.5

Note: For a comparison of domestic output, import and export numbers, see appendix C.

- Represents zero.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.²Source: Bureau of the Census report IM 146, *U.S. Imports for Consumption*.³"Apparent consumption" represents new domestic supply and is derived by subtracting exports from the sum of manufacturers' shipments plus imports.

Table 19A. **SUPPLY AND DISTRIBUTION OF TOTAL COTTONSEED OIL, SOYBEAN OIL, CORN OIL, AND PALM OIL: 1992**

[Millions of pounds]

Supply and distribution	Cottonseed oil	Soybean oil	Corn oil	Palm oil
Beginning stocks.....	163.3	2,215.7	123.6	33.0
Production (crude).....	1,207.8	14,249.6	1,856.0	(X)
Imports.....	28.0	-	37.0	224.0
A. Total supply (+).....	1,399.1	16,465.3	2,016.6	257.0
Ending stocks.....	110.4	2,280.1	225.3	37.2
Production of foots ¹	34.9	357.1	62.7	1.0
Exports ²	207.2	1,287.0	369.1	7.0
Domestic consumption ³	(D)	11,462.9	(D)	220.5
B. Total distribution (-).....	(D)	15,387.1	(D)	265.7
Statistical discrepancy (A-B) ⁴	(D)	1,078.2	(D)	-8.7
Discrepancy as a percent of total supply.....	(D)	6.5	(D)	-3.4

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (X) Not applicable.

¹Represents difference between crude oil consumed in refining and refined oil production.²Represents crude and once-refined oil only; excludes exports of fully refined oil.³Consumption of once-refined oils plus direct consumption of crude in end products.⁴Represents difference between the several elements of supply and distribution due to timing of production and stock reported, goods in transit, etc.Table 19B. **SUPPLY AND DISTRIBUTION OF SELECTED FATS AND OILS: 1992**

[Millions of pounds]

Supply and distribution	Cottonseed		Soybean		Inedible tallow and grease
	Crude	Once-refined ¹	Crude	Once-refined ¹	
Beginning stocks.....	68.8	94.5	1,955.9	259.8	348.7
Production.....	1,207.8	999.2	14,249.6	11,859.6	5,767.8
Imports.....	17.0	11.0	-	-	44.5
A. Total supply (+).....	1,293.6	1,104.7	16,205.5	12,119.4	6,161.0
Ending stocks.....	38.9	71.5	2,041.5	238.6	219.2
Exports.....	12.1	195.1	1,239.4	47.6	2,275.6
Reported domestic consumption.....	1,034.1	(D)	12,216.7	11,462.9	3,050.1
B. Total distribution (-).....	1,085.1	(D)	15,497.6	11,749.1	5,544.9
Statistical discrepancy (A-B) ²	208.5	(D)	707.9	370.3	616.1
Discrepancy as a percent of total supply.....	16.1	(D)	4.4	3.1	10.0

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

¹Includes once-refined oil consumed in making salad oil, some of which is subsequently exported.²Represents difference between the several elements of supply and distribution due to timing of production and stock reports, goods in transit, etc.**HISTORICAL NOTE**

Previously, the surveys M20J (Fats and Oils - Oilseed Crushings) and M20K (Fats and Oils - Production, Consumption, and Stocks) were published separately on an annual basis. Prior to 1991, data were collected on a monthly crop year basis starting from September 1 and ending on August 31. In 1991, data were collected on a quarterly calendar year basis starting on January 1 and ending on December 31. Currently, data are collected on a monthly calendar year basis starting from January 1 and ending on December 31.

Data on fats and oils have been collected by the Bureau of the Census since 1919. Historical data may be obtained from the Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact David Gromos on 301-763-7809 or Andrew Kraynak on 301-763-7108.

Chapter 2. Textiles, Apparel, and Footwear

GENERAL INFORMATION

This chapter of the Manufacturing Profiles document contains data for textiles, apparel, and footwear. In this chapter data are provided that cover most of the major segments of the textile industry. Data on selected finished products, such as shirts, pants, carpet, or towels, and data on the various stages of production are also included.

The first "step" in making most textile products is to make yarn. Staple yarn is a bunch of fibers twisted and spun together into a long, continuous strand. Staple fiber is the term used to identify lengths of fibers which require spinning and twisting in the manufacture of yarn. Staple fibers are either natural fibers or manmade fibers cut to a specific length. The Current Industrial Report entitled MA22F, Yarn Production, collects data on the quantity of yarn produced.

There are many different spinning systems used to make yarn from staple fibers. The three most common spinning systems are the cotton system, the woolen system, and the worsted system. Data are compiled on fiber staples consumed on these three systems in the following Current Industrial Reports: M22P, Consumption on the Cotton System and Stocks, and MQ22D, Consumption on the Woolen and Worsted Systems.

The next phase of the textile manufacturing process is fabric formation. Most fabric is either woven or knitted. Current Industrial Reports have two series that collect these data, MQ22T, Broadwoven Fabrics, and MA22K, Knit Fabrics.

The last major phase is to cut the fabric and then sew the pieces together into garments or other textile products. The Current Industrial Reports have a report entitled MQ23A, Apparel, which provides data for most major garment categories. The series also has data on MA22Q, Carpet and Rugs, MA23D, Gloves and Mittens, and the MQ23X, Sheets, Pillowcases, and Towels.

EXPLANATION OF TERMS

Blends and Mixtures. Fabrics made from more than one fiber are classified in the same way as other fabrics, i.e., according to whether the fabric is chiefly cotton, wool, or manmade fiber. For example, a fabric which is 55 percent cotton and 45 percent rayon is classified in the cotton section; a fabric which is 40 percent cotton, 30 percent rayon, and 30 percent acetate is classified in the manmade

fibers section. Blends and mixtures which are by weight 50 percent natural fiber and 50 percent manmade fiber are classified as manmade fibers fabrics.

Canton Flannel. Fabric woven with a four-harness warp face twill with heavy, soft filling yarn, and a medium count warp. A long nap is raised on the back.

Commission. Includes fabrics made from yarns owned by others.

Cotton Fabrics. Includes fabrics that are wholly or chiefly, by weight, made of cotton.

Cotton System. This term originally referred to the equipment and machinery used in the process of manufacturing cotton fiber into yarn. The cotton spinning system is now also used extensively for manmade fiber staple and cotton/manmade fiber blends. It includes the general operations of opening, picking, carding, drawing, roving, and ring or open end spinning.

Denim, All Other. Includes sport denims and all other denim not included in blue denim.

Denim, Blue. Fabrics of 3- or 4-thread twill, including broken twill, warp faced (the warp yarns which are dyed blue and the weft yarns which are unbleached, bleached, dyed gray or colored a lighter shade of blue than that of the warp yarns).

Distribution Channels:

Branded Retail. Sales of company brands including premium goods, drop (closeouts), and seconds sold to domestic consumers through all types of retailers.

Private Ticket Retail. Sales with retail identification with or without a manufacturer's corporate identification, but not with a manufacturer's brand name.

Other (Institutional). Includes domestic distribution only and includes all Federal and state contract business commercial accounts (e.g., hotels) which are sold on a contract basis, and shipments to dealers who are involved in resale to the institutional trade.

Duck. Fabrics weighing more than 5 ounces per square yard (chiefly manmade fabric) or 5.9 ounces per square yard (chiefly cotton fabric), with average yarn number of 15 or lower, napped or not; and a plain weave where the warp or filling or both, consist of multiple (folded) or cabled yarns.

Filament Yarn Fabrics. Includes all fabrics that contain 85 percent or more filament yarns.

Flat Fabrics. Fabrics containing yarns having less than 12 turns per inch.

For sale. Products which are produced for the purpose of selling them to other companies.

Garments, Men's and Boy's:

Tailored Uniform Suits. Includes military, guards, band, police, fire, etc. Nontailored work-type suits, such as delivery drivers and gas station attendants, are included under work clothing and washable service apparel.

Trios. Includes tailored suits with a matching and contrasting pair of pants.

Tailored Suit Type Sport Coats and Jackets. Includes only tailored separate suit-type coats, including tailored uniform and separate formal jackets.

Overcoats and Top Coats. Includes only tailored items, including uniform, reversible zipper-lined, fingertip, and wool water-repellent coats. Excludes raincoats.

Raincoats. Includes waterproof outercoats and water-repellent coats of cotton and manmade fibers, including uniforms. Wool and chiefly wool water-repellent coats and capes are included with overcoats and top coats.

Heavy Nontailored Outer Jackets, Including Uniform. Includes lumberjacks and mackinaws. Excludes ski jackets.

Light Nontailored Outer Jackets, Including Uniform. Includes golf-type zip front and snorkel jackets for outdoor outerwear.

Separate Vests, Including Uniform. Includes vests that are not part of suits. Excludes sweater vests.

Separate Dress and Sport Trousers, Including Uniform. Includes all pants except jeans, jean-cut casuals, dungarees, and work pants.

Jeans and Dungarees. Includes all pants of jean-type construction which are made from denim fabric. Excludes waistband overalls.

Jean-Cut Casual Slacks. Includes all pants of jean-type construction made from fabrics other than denim, to be worn as sportswear (e.g., corduroy).

Dress and Business Shirts. Includes open front shirts designed primarily for dress or business wear, usually with a collar band. Sleeve length may or may not be sized in inches. Neck may be sized or feature a convertible collar and may include shirts sized S-M-L-XL.

Work pants, Excluding Jeans and Dungarees. Includes utility trousers in a sturdy fabric designed for hard wear,

and work pants with closed-seam construction and a waistband in the same fabric as the shell. Also includes waistband overalls.

Work Shirts. Includes open front or pullover shirts in a sturdy fabric, designed for work and ease of movement.

Washable Service Apparel. Includes nontailored washable work apparel designed for use by waiters, gas station attendants, hospital staff, and other uniformed service workers.

Overall and Work Jackets. Includes utility jackets in a sturdy fabric, designed for hard work and ease of movement, usually with closed seam construction.

Team Sports Uniform. Clothing designed to be worn as a uniform in team athletic games, such as baseball, football, soccer, and hockey.

Garments, Women's, Misses', and Junior's:

Suits. Includes tailored suits and uniforms but excludes pantsuits, jumpsuits, and coordinate suit sets that can be purchased as separate pieces, e.g., shirt, vest, blouse, and pants. Excludes nurses', maids', and medical uniforms which are included in washable service apparel.

Pantsuits. Includes jumpsuits and pantsuits sold as a unit. Excludes coordinates which are sold as separates.

Dresses. Includes suit type dresses, formal, work, house, etc.

Coats and Capes. Includes toppers, car coats, suburban coats, plastic coats, reversible coats, and wool water-repellent coats, but excludes raincoats.

Jeans and Dungarees. Includes all pants of jean-type construction that are made from denim fabric.

Slacks, Including Jean-Cut Casuals. Includes all pants other than denim jeans, e.g., tailored pants and pants with an elastic waistband.

Ginghams, Plaids, and Checks. Yarn-dyed fabrics composed of two or more colors in the warp and two or more colors in the filling.

Girls'. Includes subteen and teenage girls', usually sizes 7 through 16. Also includes little girls' sizes 4 through 6x and toddler girls' sizes 2T through 4T.

High Tenacity Yarn Fabric. Fabric made from yarns having a tenacity, expressed in centinewtons per tex (cN/tex) greater than 60 cN/tex for multiple (folded) or cabled yarns of nylon or polyester; or 27 cN/tex for multiple (folded), cabled, or singles yarns of viscose rayon.

Infants'. Includes all garments, sizes 0-24 months.

Kitchen Accessories. Includes items such as terry cloth aprons, pot holders, dish cloths, and toaster covers.

Lawns, Voiles, and Batistes. Fabrics of plain weave weighing not more than 5 ounces per square yard (chiefly cotton fabric) consisting of more than 85 warp ends and filling picks per square inch, of square construction, and of average yarn number 41 or higher, napped or not napped.

Little Boys'. Includes little boys' sizes 4 through 7 and toddler boys' sizes 2T through 4T.

Manmade Fiber Fabrics. Includes fabrics that are wholly or chiefly, by weight, made of manmade fibers.

Men's and Junior Boys'. Includes all men's sizes and junior boys', preps' (cadets), and students' sizes. These usually include boys', junior boys', and preps' sizes 6-20, chest 22-36 and waist 23-30; and students' sizes, chest 35-42 and waist 28-36.

Oxfords. Fabrics weighing not more than 5 ounces per square yard (chiefly manmade fabric) or 5.9 ounces per square yard (chiefly cotton fabric), napped, or not. They are woven as a plain weave fabric except that two or more warp ends are woven as one (taped warp). Oxford cloth is not to be classified as a plain weave fabric.

Plain Weave Fabrics. A fabric construction in which each yarn of the weft passes alternately over and under successive yarns of the warp and each yarn of the warp passes alternately over and under successive yarns of the weft.

Poplin and Broadcloth. Fabrics of plain weave, not of square construction, whether or not napped. These fabrics do not include the following: fabrics weighing not more than 5.9 ounces per square yard, containing 85 or less warp ends and filling picks per square inch; or fabrics weighing more than 5.9 ounces per square yard, with average yarn number of 15 or lower.

Print Cloth. Fabrics of plain weave, weighing not more than 5 ounces per square yard (chiefly manmade fabric) or 5.9 ounces per square yard (chiefly cotton fabric) with average yarn numbers of 26-40; consisting of more than 85 single yarns per square inch; and with square construction, whether or not of yarns of different colors (yarn dyed), and whether or not napped.

Sateens. Fabrics woven with a satin weave, whether or not napped, in which the surface of the cloth consists almost entirely of warp or filling floats; that is, in the repeat of a weave pattern, each yarn of one system passes over several yarns of the other system before interlacing.

Sheeting. Fabrics of plain weave, whether or not napped, of the following types: (1) Fabrics weighing not more than 5 ounces per square yard (chiefly manmade fabric) or 5.9

ounces per square yard (chiefly cotton fabric), of square construction containing more than 85 warp end and filling picks per square inch, with average yarn number of 40 or lower, but not including print cloth. (2) Fabrics weighing more than 5 ounces per square yard (chiefly manmade fabric) or 5.9 ounces per square yard (chiefly cotton fabric), but not including fabrics of which the warp or filling, or both, consist of multiple (folded) or cabled yarns, with average yarn number of 15 or lower or fabrics with average yarn number of 16 or higher, not of square construction.

Sheet Sets. Packages of at least two sheets and one pillowcase which may contain additional sheets, pillowcases, or other items.

Shirting, Jacquard or Dobby. Fabrics weighing not more than 5 ounces per square yard (chiefly manmade fiber) or 5.9 ounces per square yard (chiefly cotton fiber), whether or not napped, or woven wholly or in part with jacquard or dobby attachment.

Spun/Filament Combinations. Includes fabrics that are combinations of spun and filament yarn where neither the spun or the filament yarns exceed 85 percent.

Spun Yarn Fabrics. Includes all fabrics that contain 85 percent or more spun yarns.

Stripes. Yarn-dyed fabrics composed of any number of colors in the warp but only one color in the filling.

Table Damask. Fabrics, whether or not napped, woven wholly or in part with jacquard or dobby attachment and characterized by elaborate decorative designs, usually of floral patterns. The designs are reversible and are formed by warpface satin weave. Table damask is generally all white, although it is sometimes made with colored stripes or in solid pastel shades.

Taped Warp Duck. Fabrics weighing more than 5 ounces per square yard (chiefly manmade fabric) or 5.9 ounces per square yard (chiefly cotton fabric), with average yarn number of 15 or lower, whether or not napped. The fabrics have a plain weave, except that two or more warp ends are woven as one (tape warp) whether or not they contain multiple (folded) or cabled yarns.

Textured Yarns. Yarns produced by looping, bulking, curling, or twisting to enhance the volume or elasticity. They include yarns made by the false twist principle, the conventional twist method (twist and detwist procedures), the stuffer crimp method, and the filament loop method. Yarns that are thrown only are excluded.

Tobacco, Cheese, and Bandage Cloth. Fabrics of plain weave, weighing not more than 5 ounces per square yard (chiefly manmade fabric) or 5.9 ounces per square yard (chiefly cotton fabric) consisting of 85 or less warp ends and filling picks per square inch, whether or not napped.

Towel Blanks. Includes towels sold for further processing elsewhere. The figure reported for finished terry woven towels includes towel blanks; thus, both sets of data are not additive.

Twill Weave Fabrics. Fabrics in which the warp and filling yarns are interlaced in such a manner as to produce a diagonal or bias effect on the face of the fabric.

Types of Finish

Solids (Sheets). Includes solid color sheets with attached hems or piping.

Fancies. Towels include jacquards, mixed color or pattern weaves, prints, embroidered, and attached or embellished hems. Excludes solid color, white dobby, and white cam. Sheets include prints and solids with embroidery, lace, or other embellishments, except attached hems or piping.

Women's, Misses' and Junior's. Includes all women's, misses' and junior's sizes.

Woolen System. Refers to the machinery and processes used to produce yarn from shorter wools and manmade fiber. The fibers are carded two or three times, and then go directly to the spinning frame. The system is used widely to produce both machine and hand knitting yarns, as well as weaving yarns where softness and bulk are desired.

Wool Fabrics. Includes fabrics that are wholly or chiefly, by weight, made of wool, reprocessed wool, or reused wool.

Wool, Reprocessed Wool, and Reused Wool. These terms are used in accordance with the definitions in the Wool Products Labeling Act of 1939.

Wool Tops. Figures on top production include only first combings and exclude recombed materials. Mixed tops are classified according to chief fiber content.

Worsted System. Refers to the machinery and process used to manufacture yarn from medium to long wools, alpaca, and mohair, as well as manmade fibers and blends. In the worsted system, the short fibers or noils are removed by combing in order to produce a compact yarn. The three basic worsted spinning systems are Bradford, French, and American.

Yarn Dyed. Fabrics woven from yarns that have been dyed.

TEXTILE MACHINERY IN PLACE

There are data for three basic types of machinery in this chapter: (1) cotton system spindles, (2) weaving machines, and (3) knitting machines. Generally, the information collected is the number of machines in place and the number of hours operated during the period.

"Machines in place" are the number of machines that are in producing positions at the end of the survey period, regardless of whether they are actually operating. In the case of spindles, the data are for the number of spindles in place, not the number of spinning frames.

Where it is available, the hours of operation refer to the number of hours the equipment was actually in use during the survey period.

The information shown on spinning equipment is for cotton system spinning machinery only. This type of information is not collected for woolen, worsted, or other spinning systems.

These data are compiled from information collected on our MA22K, Knit Fabric Production; M22P, Consumption on the Cotton System and Stocks; and MQ22T, Broadwoven Fabrics, Gray, surveys.

Table A. TEXTILE MACHINERY IN PLACE: END OF YEAR 1992

Product description	Machines in place
Total looms.....	94,286
Shuttle type looms.....	29,102
Single shuttle cam looms.....	20,458
Single shuttle dobby looms.....	4,812
Multiple shuttle box or head motion looms.....	2,448
Double shuttle pile and plush, and jacquard looms.....	1,384
Shuttleless looms and weaving machines.....	65,184
Single filling insertion capability.....	38,922
Air jet looms.....	15,660
Water jet looms.....	6,039
Projectile looms.....	12,361
Rapier looms.....	4,862
Multiple filling insertion capability.....	25,532
Air jet looms.....	(D)
Water jet looms.....	(D)
Projectile looms.....	10,260
Rapier looms.....	11,922
Pile and plush looms.....	730
Cotton system spindles in place.....	8,240
Spinning 100% cotton fibers.....	3,472
Ring spindles.....	3,016
Open end position (rotors).....	456
Spinning 100% manmade fibers.....	1,315
Ring spindles.....	1,285
Open end position (rotors).....	30
Spinning cotton/manmade blends.....	3,453
Ring spindles.....	3,128
Open end position (rotors).....	325
Knitting machines.....	26,217
Warp knitting machines (over 12 inches in width).....	4,658
Pile fabrics.....	1,373
Elastic fabrics.....	1,419
All other warp knit fabrics.....	1,866
Warp knitting machines (12 or less inches in width).....	565
Elastic fabrics.....	454
All other warp knit fabrics.....	111
Weft knitting machines (over 12 inches in width).....	17,247
Pile fabrics.....	1,079
Elastic fabrics.....	177
Single circular knit.....	10,664
Double knit and interlock.....	2,807
Rib, other than double knit and interlock.....	2,520
Weft knitting machines (12 or less inches in width).....	356
Elastic fabrics.....	(D)
All other weft knit fabrics.....	(D)
Knitting garment lengths, trimmings, and collars.....	3,391
Knit garment lengths, made on sweater-strip, V-bed strip, and full-fashioned machines.....	2,084
Knit trimmings and collars.....	1,307

(D) Data withheld to avoid disclosing figures for individual companies.

Table B. TEXTILE MACHINES IN PLACE AND HOURS OPERATED, BY QUARTER: 1992

[Looms in thousands of hour units; spindles in millions of hours units]

Product description	Hours, year-to- date	First quarter		Second quarter		Third quarter		Fourth quarter	
		Machines	Hours	Machines	Hours	Machines	Hours	Machines	Hours
Total looms	684,252	97,544	176,748	97,858	175,393	95,539	170,102	94,286	162,009
Shuttle type looms	204,744	32,468	56,636	31,457	52,700	30,432	50,291	29,102	45,117
Single shuttle cam looms	143,171	22,479	39,021	21,778	36,926	21,136	34,835	20,458	32,389
Single shuttle dobby looms	39,569	6,031	11,729	5,592	10,466	5,386	9,418	4,812	7,956
Multiple shuttle box or head motion looms	13,841	2,438	3,622	2,603	3,270	2,436	3,885	2,448	3,064
Double shuttle pile and plush, and jacquard looms	8,163	1,520	2,264	1,484	2,038	1,474	2,153	1,384	1,708
Shuttleless looms and weaving machines	479,508	65,076	120,112	66,401	122,693	65,107	119,811	65,184	116,892
Single filling insertion capability	302,258	38,952	76,008	39,258	77,180	38,842	75,054	38,922	74,016
Air jet looms	123,772	15,494	31,222	15,630	31,232	15,582	30,945	15,660	30,373
Water jet looms	44,811	5,974	11,378	6,028	11,664	6,009	11,397	6,039	10,372
Projectile looms	97,689	12,301	24,097	12,653	24,840	12,443	24,116	12,361	24,636
Rapier looms	35,986	5,183	9,311	4,947	9,444	4,808	8,596	4,862	8,635
Multiple filling insertion capability	172,863	25,318	43,065	26,333	44,356	25,539	43,596	25,532	41,846
Air jet looms	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Water jet looms	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Projectile looms	74,442	10,473	18,946	10,716	19,393	10,436	18,120	10,260	17,983
Rapier looms	73,456	11,834	18,221	12,056	18,465	11,829	18,913	11,922	17,857
Pile and plush looms	4,387	806	1,039	810	1,157	726	1,161	730	1,030
Cotton system spindles in place	59,562	8,727	16,537	8,672	15,201	8,461	14,367	8,240	13,457
Spinning 100% cotton fibers	24,718	3,761	6,698	3,741	6,367	3,560	6,008	3,472	5,645
Ring spindles	21,267	3,332	5,810	3,296	5,532	3,110	5,148	3,016	4,777
Open end position (rotors)	3,451	429	888	445	835	450	860	456	868
Spinning 100% manmade fibers	8,514	1,335	2,283	1,361	2,202	1,332	2,099	1,315	1,930
Ring spindles	8,299	1,304	2,229	1,331	2,150	1,303	2,031	1,285	1,889
Open end position (rotors)	215	31	54	30	52	29	68	30	41
Spinning cotton/manmade blends	26,330	3,631	7,556	3,570	6,632	3,569	6,260	3,453	5,882
Ring spindles	23,636	3,321	6,862	3,251	5,966	3,226	5,568	3,128	5,240
Open end position (rotors)	2,694	310	694	319	666	343	692	325	642

(D) Data withheld to avoid disclosing figures for individual companies.

STAPLE FIBER CONSUMPTION

Staple fiber is the term used to identify lengths of fiber that require spinning and twisting in the manufacture of yarn. They are either natural fibers or manufactured fibers that are cut to a specific length. They are generally an inch to an inch and a half long.

This chapter contains information on the amount of fiber consumed on the cotton, woolen, and worsted spinning systems. These terms refer to the group of machinery used in the manufacture of spun yarn. Producing a yarn is the first step in the manufacture of textile products.

Although the vast majority of staple fiber is spun on the three systems for which data is collected, there is a small amount of fiber consumed on other spinning systems. There is also a small amount of staple fiber consumed without spinning, in processes such as felting. Neither the amount spun on other systems nor the amount consumed by other means are included in these data.

Since these data are for staple fiber consumption, they should account for nearly all of the cotton fiber and wool (or other fine animal hair) consumed in domestic manufacturing, but only a portion of the manufactured fibers such as rayon, acrylic, nylon, and polyester.

In the case of cotton, in addition to information on the consumption of cotton fiber, information is provided also on the consumption of cotton linters. Linters are the short fibers that adhere to the cotton seeds after the first ginning. These are removed from the cotton seed by a separate process and are used in the manufacture of some types of rayon and by the chemicals and paper industries.

The data on fiber consumption are collected in two surveys: MQ22D, Consumption on the Woolen System and Worsted Combing and M22P, Consumption on the Cotton System and Stocks. In all cases, the information in this chapter is presented for the consumption of a specific type of fiber. Additional information is presented depending on the fiber.

2.1 CONSUMPTION ON THE COTTON SYSTEM

INTRODUCTION

The tables in this subsection present data on the fiber consumed in cotton system spinning. Cotton system spinning is a process of manufacturing cotton fiber into yarn. It includes the general operations of opening, picking, carding, drawing, roving, and spinning. In making combed yarns, three steps are added. The system is also used extensively for spinning manufactured fibers and blends.

The data in these tables are collected using two questionnaires: M22P, Consumption on the Cotton System and Stocks, and the M22N, Cotton and Raw Linters in Public Storage. Much of the data shown reflect the interest in cotton as an important agricultural and export commodity.

The fiber data in these tables are shown in two basic units of measure, running bales and pounds. Bale weights do vary, but they average around slightly over 500 pounds for cotton and from 610 to 620 pounds for linters. Data for stocks in public storage are collected only in bales, and data for manufactured fiber are collected only in pounds.

EXPLANATION OF TERMS

See explanation of terms at the beginning of this chapter.

Table 1. **SUMMARY OF DAILY AVERAGES OF COTTON AND MANMADE FIBERS CONSUMED ON THE COTTON SYSTEM, SPINDLE HOURS OPERATED, AND END-OF-MONTH STOCKS, INCLUDING STOCKS HELD AT PUBLIC WAREHOUSES: 1992**

[Cotton in running bales; manmade fibers in thousand pounds; spindle hours operated in millions]

Month	Daily average consumption						Stocks		Daily average spindle hours operated
	Cotton			Manmade fibers			Cotton ²	Manmade fiber staple	
	Total	Upland	Long staple ¹	Total	Cellulosic	Non-cellulosic			
NOT SEASONALLY ADJUSTED									
December	31,686	31,516	170	4,919	739	4,180	11,850	62,624	182
November	37,840	37,644	196	5,963	863	5,100	11,535	60,395	214
October	39,938	39,715	223	6,379	890	5,489	7,049	61,214	233
September	38,008	37,800	208	6,225	850	5,375	2,950	61,869	221
August	38,783	38,532	251	6,577	939	5,638	2,863	65,863	231
July	34,114	33,875	239	5,950	828	5,122	3,469	68,127	212
June	35,402	35,199	203	6,094	839	5,255	4,364	62,942	226
May	37,581	37,316	265	6,406	922	5,484	5,685	62,183	240
April	35,946	35,688	258	6,184	934	5,250	6,909	65,126	237
March	35,985	35,746	239	6,537	864	5,673	8,327	67,011	236
February	36,541	36,313	228	6,578	891	5,687	9,786	63,655	241
January	34,877	34,622	255	5,965	894	5,071	10,884	68,029	233
SEASONALLY ADJUSTED									
December	37,487	37,317	170	5,753	874	5,093	7,397	62,624	219
November	38,083	37,887	196	5,756	835	5,115	7,885	60,395	212
October	37,630	37,407	223	5,843	818	5,193	7,168	61,214	215
September	36,590	36,382	208	5,851	808	5,195	6,267	61,869	213
August	36,667	36,416	251	6,030	840	5,332	6,552	65,863	218
July	37,574	37,335	239	6,653	968	5,685	6,604	68,127	244
June	35,037	34,834	203	6,022	815	5,207	6,794	62,942	224
May	35,970	35,705	265	6,111	859	5,252	7,019	62,183	230
April	35,715	35,457	258	5,930	903	5,027	7,261	65,126	229
March	35,406	35,167	239	6,529	879	5,650	7,390	67,011	233
February	35,738	35,510	228	6,468	927	5,541	7,280	63,655	236
January	34,982	34,727	255	6,018	948	5,070	7,224	68,029	236

¹Long staple cotton includes American-Pima, Egyptian, Sudanese, and all other foreign cotton.

²Cotton in 1,000 running bales.

Table 2. SUPPLY AND DISTRIBUTION OF COTTON 1991/1992 CROP YEAR

Supply and distribution	Cotton
SUPPLY	
Stocks, July 31, 1991	2,389,483
In consuming establishments	578,876
In public storage and at compresses	1,710,607
Elsewhere	100,000
Net imports	79
Total imports for consumption	79
Less: Re-exports	-
Ginnings, crop of 1991 during crop year 1991 to 1992	17,009,050
Total ginnings, crop of 1991	17,146,150
Less: Ginnings prior to August 1, 1991	137,100
Ginnings, prior to August 1, 1992, crop year of 1992	14,200
Aggregate supply	19,412,812
DISTRIBUTION	
Total exports	6,385,500
Consumption, August 1, 1991, to August 1, 1992 ¹	9,288,573
Cotton lost or destroyed	10,000
Stocks, August 1, 1992 ²	3,568,766
In consuming establishments	663,128
In public storage	2,805,638
Elsewhere (partially estimated) ³	100,000
Aggregate distribution	19,252,839
Excess of reported supply over distribution	159,973

- Represents zero.

¹Due to the change in reporting from quarterly to monthly, mill consumption may have been overstated for the period of December 29 to December 31, 1991. The extent of any double counting is not known. No adjustments have been made.

²The cotton "carry-over" in the United States as of August 1, 1992, is 3,568,766 bales. Linters are not included in this "carry-over." In addition to stocks of cotton in warehouses and in consuming establishments, this figure includes a partially estimated count of cotton held elsewhere.

³Includes cotton in transit to ports, warehouses, consuming establishments, and Canada; on docks, on shipboard but not cleared, and in other port stocks not in warehouses or consuming establishments; and on farms, in merchant sheds, and in other private storage.

Table 3. CONSUMPTION OF DOMESTIC AND FOREIGN COTTON, BY STAPLE LENGTH, BY MONTH: 1992

Month	Total	American upland						Extra long staple and foreign
		Total	Staples less than 1"	1" and 1-1/32" staples	1-1/16" and 1-1/32" staples	Staples larger than 1-1/32"	Staples not specified by kind	
Number of running bales								
Total, year ending December 31, 1992	9,613,162	9,553,114	188,772	1,931,816	6,800,025	632,501	-	60,048
December	792,130	787,888	12,807	162,418	556,711	55,952	-	4,242
November	756,231	752,311	15,104	149,405	537,424	50,378	-	3,920
October	798,747	794,293	16,137	154,979	570,463	52,714	-	4,454
September	950,193	945,003	18,956	188,324	669,473	68,250	-	5,190
August	775,642	770,630	15,463	151,489	548,812	54,866	-	5,012
July	682,279	677,500	13,182	137,101	480,524	46,693	-	4,779
June	885,056	879,975	15,157	187,072	618,359	59,387	-	5,081
May	751,605	746,310	13,696	150,742	532,613	49,259	-	5,295
April	718,925	713,756	13,269	144,744	512,314	43,429	-	5,169
March	899,598	893,633	19,511	185,560	634,843	53,719	-	5,965
February	730,823	726,257	15,154	146,392	520,280	44,431	-	4,566
January	871,933	865,558	20,336	173,590	618,209	53,423	-	6,375
Thousand pounds								
Total, year ending December 31, 1992	4,804,894	4,774,728	94,328	966,252	3,397,887	316,261	-	30,166
December	395,500	393,372	6,393	81,039	277,941	27,999	-	2,128
November	377,248	375,276	7,531	74,469	268,161	25,115	-	1,972
October	399,162	396,922	8,061	77,355	285,157	26,349	-	2,240
September	475,238	472,627	9,469	94,238	334,762	34,158	-	2,611
August	387,974	385,455	7,732	75,816	274,465	27,442	-	2,519
July	341,339	338,935	6,592	68,742	240,258	23,343	-	2,404
June	442,566	440,000	7,582	93,678	309,094	29,646	-	2,566
May	375,719	373,050	6,829	75,503	266,110	24,608	-	2,669
April	359,523	356,932	6,638	72,544	256,044	21,706	-	2,591
March	449,774	446,776	9,750	92,837	317,293	26,896	-	2,998
February	365,375	363,097	7,582	73,232	260,028	22,255	-	2,278
January	435,476	432,286	10,169	86,799	308,574	26,744	-	3,190

Note: Starting with August 1992, data were adjusted to reflect missing establishments.

- Represents zero.

Table 4. CONSUMPTION OF DOMESTIC AND FOREIGN COTTON, BY STATE: 1992

[Domestic cotton in running bales; foreign cotton in equivalent 480-pound bales]

Month	Domestic and foreign total	Cotton growing states									All other States
		Total	Alabama	Georgia	North Carolina	South Carolina	Tennessee	Texas	Virginia	Other	
Total, year ending December 31, 1992 ..	Number of running bales										
	9,613,162	9,579,305	1,396,047	1,571,804	4,162,263	1,807,041	106,513	138,665	170,250	226,722	33,857
December	792,130	787,999	119,617	130,137	340,327	147,701	9,127	11,509	11,843	17,738	4,131
November	756,231	750,865	109,103	122,640	326,839	141,338	9,253	10,625	13,209	17,858	5,366
October	798,747	794,272	117,583	130,136	342,421	148,610	9,295	12,618	15,268	18,341	4,475
September	950,193	945,438	144,147	154,297	412,045	173,064	9,905	13,446	16,745	21,789	4,755
August	775,642	771,288	113,621	128,933	328,455	146,444	8,787	12,329	14,058	18,661	4,354
July	682,279	680,615	95,588	113,565	296,270	129,061	8,199	8,712	13,276	15,944	1,664
June	885,056	883,680	127,256	141,581	391,014	165,424	10,459	13,063	13,228	21,655	1,376
May	751,605	749,724	107,659	122,249	330,161	139,592	7,996	11,215	12,962	17,890	1,881
April	718,925	718,201	97,563	120,262	312,154	138,170	7,067	9,928	13,928	19,129	724
March	899,598	897,789	135,644	145,646	389,041	170,563	8,540	12,874	15,921	19,560	1,809
February	730,823	729,719	104,590	119,861	318,200	139,942	7,191	9,092	13,180	17,663	1,104
January	871,933	869,715	123,676	142,497	375,336	167,132	10,694	13,254	16,632	20,494	2,218
Total, year ending December 31, 1992 ..	Thousand pounds										
	4,804,894	4,787,988	696,666	786,284	2,080,876	903,274	53,315	69,285	85,012	113,276	16,906
December	395,500	393,435	59,750	65,025	169,865	73,724	4,565	5,741	5,901	8,864	2,065
November	377,248	374,569	54,369	61,270	163,022	70,502	4,649	5,291	6,584	8,882	2,679
October	399,162	396,930	58,828	65,011	171,009	74,306	4,681	6,285	7,628	9,182	2,232
September	475,238	472,864	71,902	77,230	206,180	86,593	4,967	6,746	8,373	10,873	2,374
August	387,974	385,801	56,606	64,600	164,431	73,247	4,386	6,154	7,015	9,362	2,173
July	341,339	340,508	47,735	56,830	148,346	64,497	4,123	4,364	6,646	7,967	831
June	442,566	441,878	63,487	70,922	195,569	82,728	5,217	6,534	6,598	10,823	688
May	375,719	374,773	53,552	61,249	165,150	69,843	3,998	5,602	6,471	8,908	946
April	359,523	359,162	48,686	60,226	156,107	69,133	3,530	4,960	6,945	9,575	361
March	449,774	448,873	67,791	72,787	194,613	85,255	4,254	6,426	7,971	9,776	901
February	365,375	364,825	52,302	59,964	159,074	69,939	3,597	4,545	6,582	8,822	550
January	435,476	434,370	61,658	71,170	187,510	83,507	5,348	6,637	8,298	10,242	1,106

Note: Starting with August 1992, data were adjusted to reflect missing establishments.

Table 5. STOCKS OF COTTON HELD IN CONSUMING ESTABLISHMENTS AND IN PUBLIC WAREHOUSES: 1992

[Domestic cotton in running bales; foreign cotton in equivalent 480-pound bales]

Month	Total ¹	In consuming establishments			In warehouses and compresses		
		Total	American upland	Other cotton ²	Total	American upland	Other cotton ²
December	11,850,160	598,505	585,844	12,661	11,251,655	10,995,739	255,916
November	10,534,575	519,223	505,260	13,963	10,015,352	9,825,464	189,888
October	7,049,255	514,694	500,544	14,150	6,534,561	6,434,842	99,719
September	2,950,318	555,245	542,015	13,230	2,395,073	2,320,381	74,692
August	2,863,365	636,417	623,302	13,115	2,226,948	2,141,938	85,010
July	3,468,766	663,128	650,158	12,970	2,805,638	2,705,059	100,579
June	4,363,588	640,888	629,129	11,759	3,722,700	3,608,571	114,129
May	5,685,481	628,253	617,103	11,150	5,057,228	4,912,512	144,716
April	6,909,312	636,679	626,766	9,913	6,272,633	6,107,965	164,668
March	8,326,922	631,202	621,211	9,991	7,695,720	7,504,621	191,099
February	9,786,018	579,926	570,463	9,463	9,206,092	8,983,510	222,582
January	10,883,982	594,220	584,777	9,443	10,289,762	10,007,640	282,122

Note: Starting with August 1992, data were adjusted to reflect missing establishments.

¹Excludes cotton in transit to ports, warehouses, consuming establishments, and Canada; on docks, on shipboard but not cleared, and in other port stocks not in warehouses or consuming establishments; and on farms, in merchant sheds, and in other private storage.²Includes foreign cotton, American Pima, Sea Island, and other domestic cotton.

Table 6. STOCKS OF COTTON HELD BY CONSUMING ESTABLISHMENTS, BY STATE: 1992

[Domestic cotton in running bales; foreign cotton in equivalent 480-pound bales]

Month	Domestic and foreign total	Cotton growing states									All other States
		Total	Alabama	Georgia	North Carolina	South Carolina	Tennessee	Texas	Virginia	Other	
	Number of running bales										
December	598,505	596,711	149,743	70,213	227,314	109,420	7,044	(D)	(D)	5,782	1,794
November	519,223	517,147	135,588	65,180	200,619	89,261	4,694	(D)	(D)	5,823	2,076
October	514,694	513,070	130,279	69,011	190,191	87,099	5,942	(D)	(D)	6,419	1,624
September	555,245	553,483	113,449	76,466	207,927	115,832	7,305	(D)	(D)	6,819	1,762
July	663,128	662,261	151,945	84,029	231,190	150,873	10,309	(D)	(D)	6,382	867
June	640,888	640,036	149,346	76,337	224,028	148,048	10,769	(D)	(D)	6,547	852
May	628,253	627,284	141,665	71,722	216,521	145,770	11,251	(D)	(D)	5,441	969
April	636,679	635,840	146,785	75,931	215,207	152,684	11,099	(D)	(D)	6,395	839
March	631,202	630,187	140,202	73,791	224,961	154,350	10,144	(D)	(D)	6,560	1,015
February	579,926	578,603	119,409	76,813	201,861	146,587	10,406	(D)	(D)	5,416	1,323
January	594,220	593,238	125,171	75,033	222,960	132,059	10,611	(D)	(D)	5,672	982
	Thousand pounds										
December	298,976	298,079	74,823	35,151	113,573	54,575	3,537	(D)	(D)	2,891	897
November	259,324	258,287	67,716	32,644	100,185	44,576	2,350	(D)	(D)	2,890	1,037
October	257,228	256,422	65,129	34,498	94,993	43,557	2,987	(D)	(D)	3,208	806
September	277,775	276,894	56,775	38,263	104,008	57,953	3,667	(D)	(D)	3,414	881
August	318,215	317,477	66,392	38,705	121,019	72,067	4,941	(D)	(D)	3,442	738
July	331,689	331,242	75,856	42,478	115,715	75,162	5,116	(D)	(D)	3,202	447
June	319,989	319,555	74,453	38,258	111,994	73,846	5,338	(D)	(D)	3,275	434
May	314,329	313,839	70,751	35,973	108,287	72,983	5,575	(D)	(D)	2,729	490
April	318,335	317,912	73,345	37,968	107,598	76,405	5,555	(D)	(D)	3,202	423
March	315,223	314,716	70,033	36,854	112,427	76,982	5,075	(D)	(D)	3,284	507
February	289,709	289,047	59,648	38,411	100,864	73,174	5,201	(D)	(D)	2,709	662
January	296,872	296,381	62,513	37,503	111,374	65,997	5,301	(D)	(D)	2,841	491

Note: Starting with August 1992, data were adjusted to reflect missing establishments.

(D) Data withheld to avoid disclosing figures for individual companies.

Table 7. STOCKS OF COTTON HELD IN PUBLIC STORAGE AND AT COMPRESSES, BY STATE: 1992

States	December	November	October	Sep- tember	August	July	June	May	April	March	February	January
Total	11,251,655	10,015,352	6,534,561	2,395,073	2,226,948	2,805,638	3,722,700	5,057,228	6,272,633	7,695,720	9,206,092	10,289,762
Alabama	488,191	429,520	261,122	62,875	81,949	110,381	150,173	206,221	256,910	342,928	408,297	456,885
Arizona and New Mexico	560,683	536,167	338,346	118,645	95,793	118,414	145,782	174,810	256,452	327,306	414,135	509,571
Arkansas	1,281,011	1,023,927	645,493	78,904	94,570	212,549	250,192	374,529	497,002	609,735	735,736	841,271
California	2,057,212	1,812,004	1,056,448	312,357	339,498	465,079	619,392	831,659	1,035,916	1,293,727	1,502,604	1,696,958
Florida and Georgia	475,438	347,715	209,126	87,169	113,993	148,202	201,288	219,212	295,516	368,745	423,791	474,645
Louisiana	1,027,669	1,137,091	943,520	299,408	124,618	257,223	430,982	602,391	756,262	882,600	1,017,920	1,119,714
Mississippi	1,553,467	1,625,793	1,178,126	233,758	157,074	299,622	485,224	674,486	835,557	1,018,781	1,249,326	1,452,058
Missouri	306,313	296,541	175,855	12,333	19,471	37,705	52,955	77,156	98,471	129,725	151,618	183,217
North Carolina	268,542	198,003	94,865	57,536	85,978	122,294	171,991	210,233	244,710	286,809	341,301	374,541
Oklahoma and Texas	2,141,945	1,620,704	1,013,628	965,202	853,980	661,486	743,038	1,109,508	1,383,090	1,732,346	2,143,546	2,310,579
South Carolina	133,093	94,338	74,586	38,134	50,578	64,063	74,102	91,779	108,572	129,223	145,409	158,473
Tennessee	958,091	893,549	543,446	128,752	209,446	308,620	397,581	485,244	504,175	573,795	672,409	711,850
Other States	-	-	-	-	-	-	-	-	-	-	-	-

- Represents zero.

Table 8. CONSUMPTION OF MANMADE FIBER STAPLE: 1992

[Thousands of pounds]

Month	Total	Rayon and/or acetate	Nylon	Acrylic and modacrylic	Polyester	Other man- made fiber staple
Total, year ending December 31, 1992....	1,624,211	229,964	52,731	99,319	1,235,398	6,799
December	122,957	18,468	4,773	6,900	92,382	434
November	119,259	17,251	4,072	6,597	90,919	420
October	127,572	17,797	2,785	7,296	99,101	593
September	155,617	21,242	5,173	8,892	119,773	537
August	131,535	18,779	5,337	7,754	99,024	641
July	118,990	16,553	3,554	7,788	90,501	594
June	152,366	20,979	4,937	11,010	114,730	710
May	128,112	18,439	3,977	8,954	96,155	587
April	123,702	18,689	3,988	8,092	92,431	502
March	163,415	21,601	4,626	9,992	126,469	727
February	131,558	17,816	4,437	7,906	101,046	353
January	149,128	22,350	5,072	8,138	112,867	701

Note: Starting with August 1992, data were adjusted to reflect missing establishments.

Table 9. STOCKS OF MANMADE FIBER STAPLE: 1992

[Thousands of pounds]

Month	Total ¹	Rayon and/or acetate	Nylon	Acrylic and modacrylic	Polyester	Other man- made fiber staple
December	62,624	13,013	1,159	3,792	44,207	453
November	60,395	12,248	1,206	4,749	41,691	501
October	61,214	11,973	956	4,240	43,576	469
September	61,869	12,328	1,054	4,569	43,461	457
August	65,863	14,369	1,532	3,927	45,531	504
July	68,127	16,038	908	4,496	46,081	604
June	62,942	14,631	767	4,538	42,313	693
May	62,183	13,692	607	4,906	42,316	662
April	65,126	14,532	1,248	4,943	43,640	763
March	67,011	14,575	1,156	3,913	46,814	553
February	63,655	15,194	1,055	4,320	42,483	603
January	68,029	15,845	1,877	6,064	43,507	736

Note: Starting with August 1992, data were adjusted to reflect missing establishments.

¹ Stocks are only for mills with cotton system spindles.

Table 10. CONSUMPTION, STOCKS, AND SPINDLE ACTIVITY ON THE COTTON SYSTEM, BY INDUSTRY GROUPS: 1992

Product description	Unit of measure	Total	December	November	October	September	August	July	June	May	April	March	February	January
All industries total:														
Domestic and foreign cotton:														
Consumption	Bales	9,813,182	792,130	758,231	798,747	950,193	775,642	682,279	685,056	751,605	718,925	696,596	730,823	871,933
Stocks	..do	(NA)	598,505	519,223	514,894	555,245	638,417	663,128	640,888	628,253	636,679	631,202	579,626	564,220
Manmade fiber staple:														
Consumption	M lbs.	1,824,211	122,957	119,259	127,572	155,817	131,535	118,990	152,366	128,112	123,702	163,415	131,558	149,128
Stocks	..do	(NA)	82,824	60,395	81,214	81,889	85,863	68,127	62,942	62,183	65,126	67,011	63,655	68,029
Cellulosic:														
Consumption	..do	229,964	18,468	17,251	17,797	21,242	18,779	18,553	20,979	18,439	18,689	21,601	17,816	22,350
Stocks	..do	(NA)	13,013	12,248	11,973	12,328	14,389	18,038	14,831	13,892	14,532	14,575	15,194	15,845
Noncellulosic:														
Consumption	..do	1,394,247	104,489	102,008	109,775	134,375	112,756	102,437	131,387	109,873	105,013	141,814	113,742	126,778
Stocks	..do	(NA)	49,811	48,147	49,241	49,541	51,494	52,089	48,311	48,491	50,594	52,436	48,461	52,184
Spindle activity:														
Spindles in place	Thous.	(NA)	8,775	8,818	8,889	8,988	8,964	8,941	8,964	9,025	9,054	9,126	9,141	9,246
Active spindles	..do	(NA)	8,325	8,391	8,478	8,548	8,593	8,540	8,598	8,730	8,895	8,727	8,747	8,814
Hours operated	Millions	59,787	4,590	4,314	4,662	5,554	4,648	4,241	5,647	4,800	4,754	5,893	4,810	5,834
Weaving mills (SIC 221, 222, 223, and 224):														
Domestic and foreign cotton:														
Consumption	Bales	5,798,435	471,497	448,208	474,201	558,157	481,955	413,043	538,090	458,855	440,454	552,898	448,782	536,495
Stocks	..do	(NA)	353,974	313,851	329,979	382,132	391,264	423,024	412,750	400,293	410,011	401,182	379,848	370,333
Manmade fiber staple:														
Consumption	M lbs.	953,155	72,529	70,539	75,038	92,798	78,905	71,099	89,719	75,129	73,078	91,561	72,892	90,070
Stocks	..do	(NA)	34,642	32,819	33,190	34,330	37,950	38,483	35,007	33,298	36,972	39,988	35,683	39,278
Cellulosic:														
Consumption	..do	153,482	12,582	11,815	12,058	14,258	12,827	11,328	13,451	12,487	12,753	14,335	11,563	14,429
Stocks	..do	(NA)	8,794	8,425	8,381	8,943	7,725	8,917	8,223	7,564	8,486	9,068	8,918	9,550
Noncellulosic:														
Consumption	..do	799,693	59,987	58,924	62,982	78,540	68,278	59,771	78,268	62,642	60,325	77,226	61,129	75,641
Stocks	..do	(NA)	27,848	28,394	26,809	27,387	30,225	29,586	28,784	25,734	28,478	30,920	26,765	29,728
Spindle activity:														
Spindles in place	Thous.	(NA)	5,829	5,833	5,685	5,710	5,718	5,765	5,781	5,832	5,842	5,944	5,918	6,017
Active spindles	..do	(NA)	5,306	5,310	5,357	5,442	5,473	5,517	5,569	5,639	5,592	5,649	5,640	5,723
Hours operated	Millions	38,880	3,018	2,801	3,029	3,624	3,039	2,760	3,710	3,106	3,067	3,823	3,108	3,795
Yarn and thread mills (SIC 228):														
Domestic and foreign cotton:														
Consumption	Bales	3,428,368	284,214	271,949	285,760	349,622	273,073	241,703	319,597	266,625	252,955	318,691	258,183	305,996
Stocks	..do	(NA)	206,463	180,115	158,531	160,070	204,976	201,149	188,020	189,317	188,952	186,946	164,379	189,546
Manmade fiber staple:														
Consumption	M lbs.	502,272	37,820	35,660	39,030	47,852	38,690	35,802	46,996	39,203	36,834	55,897	44,794	43,694
Stocks	..do	(NA)	20,912	21,295	21,075	20,489	20,340	22,045	20,522	21,764	20,938	19,362	20,354	21,674
Cellulosic:														
Consumption	..do	55,812	4,482	4,087	4,257	5,343	4,620	3,873	5,722	4,273	4,272	5,527	4,063	5,293
Stocks	..do	(NA)	5,459	5,323	5,001	4,759	5,910	6,485	5,756	5,714	5,406	4,774	5,298	5,295
Noncellulosic:														
Consumption	..do	446,460	33,338	31,573	34,773	42,509	34,070	31,929	41,274	34,930	32,562	50,370	40,731	38,401
Stocks	..do	(NA)	15,453	15,972	16,074	15,730	14,430	15,560	14,766	16,050	15,532	14,588	15,056	16,379
Spindle activity:														
Spindles in place	Thous.	(NA)	2,760	2,805	2,826	2,903	2,892	2,847	2,857	2,867	2,886	2,871	2,910	2,905
Active spindles	..do	(NA)	2,673	2,718	2,761	2,767	2,756	2,721	2,735	2,777	2,790	2,779	2,808	2,799
Hours operated	Millions	18,735	1,381	1,316	1,469	1,721	1,427	1,333	1,770	1,533	1,516	1,883	1,540	1,846
All other industry groups:														
Domestic and foreign cotton:														
Consumption	Bales	388,359	36,419	38,074	38,786	44,414	40,614	27,533	27,369	26,125	25,516	28,209	25,858	29,442
Stocks	..do	(NA)	38,068	25,457	26,164	33,043	40,177	38,955	40,118	38,643	37,716	43,094	35,899	34,341
Manmade fiber staple:														
Consumption	M lbs.	168,784	12,608	13,060	13,504	14,969	13,940	12,089	15,651	13,780	13,790	15,957	14,072	15,364
Stocks	..do	(NA)	7,070	6,281	6,949	7,050	7,573	7,599	7,413	7,121	7,216	7,661	7,618	7,077
Cellulosic:														
Consumption	..do	20,690	1,424	1,549	1,484	1,643	1,532	1,352	1,806	1,679	1,664	1,739	2,190	2,628
Stocks	..do	(NA)	760	500	591	626	734	636	652	414	630	733	978	1,000
Noncellulosic:														
Consumption	..do	148,094	11,184	11,511	12,020	13,326	12,408	10,737	13,845	12,101	12,126	14,218	11,882	12,736
Stocks	..do	(NA)	6,310	5,781	6,358	6,424	6,839	6,963	6,761	6,707	6,586	6,928	6,640	6,077
Spindle activity:														
Spindles in place	Thous.	(NA)	386	378	378	375	376	329	326	326	326	311	313	324
Active spindles	..do	(NA)	346	363	358	337	364	302	294	314	313	299	299	292
Hours operated	Millions	2,152	191	197	184	209	182	148	167	161	171	187	162	193

(NA) Not available.

Table 11. CONSUMPTION OF LINTERS, BY TYPE OF CONSUMER: 1992

[Number of running bales]

Month	Total	Bleachers	Other consumers		
			Total	Pacific and Mountain States	All other States
Total, year ending December 31, 1992	738,361	677,252	61,109	16,121	44,988
December	58,179	53,708	4,471	1,257	3,214
November	54,874	50,066	4,808	1,298	3,510
October	61,165	55,353	5,812	1,382	4,430
September	71,914	65,792	6,122	1,441	4,681
August	56,677	51,447	5,230	1,379	3,851
July	49,423	44,534	4,889	1,294	3,595
June	62,712	57,173	5,539	1,413	4,126
May	63,191	58,825	4,366	1,231	3,135
April	61,298	56,606	4,692	1,271	3,421
March	65,295	60,353	4,942	1,415	3,527
February	63,846	59,288	4,558	1,212	3,346
January	69,787	64,107	5,680	1,528	4,152

Table 12. STOCKS OF LINTERS, BY TYPE OF ESTABLISHMENT: 1992

[Number of running bales]

Month	All establish-ments	Bleachers	Other consumers			Public stor- age and compresses	Oil mills ¹
			Total	Pacific and Mountain States	All other States		
December	436,522	328,745	(D)	(D)	(D)	(D)	100,649
November	404,933	298,754	(D)	(D)	(D)	(D)	99,140
October	384,788	277,169	(D)	(D)	(D)	(D)	99,804
September	366,244	270,056	(D)	(D)	(D)	(D)	89,945
August	419,267	299,767	(D)	(D)	(D)	(D)	109,433
July	428,101	306,506	(D)	(D)	(D)	(D)	115,382
June	443,899	304,547	(D)	(D)	(D)	(D)	123,463
May	450,949	306,465	(D)	(D)	(D)	(D)	126,320
April	457,337	323,825	(D)	(D)	(D)	(D)	115,527
March	459,714	330,618	(D)	(D)	(D)	(D)	111,225
February	442,006	325,992	(D)	(D)	(D)	(D)	100,328
January	417,101	320,859	(D)	(D)	(D)	(D)	80,739

(D) Data withheld to avoid disclosing figures for individual companies.

¹Oil mill stocks in estimated running bales based on information reported in pounds.**HISTORICAL NOTE**

Data on cotton consumption and stocks have been collected by the Bureau of the Census since 1912. Except for 1991, which was done on a quarterly basis, the entire series is monthly. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959), available at your local Federal Depository Library.

Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Karen Harshbarger, 301-763-4476.

2.2 CONSUMPTION ON THE WOOLEN SYSTEM AND WORSTED COMBING

INTRODUCTION

These data cover all establishments consuming fibers in woolen spinning and/or producing tops and noils, including commission work on materials owned by others (fibers laid in mixes for commission spinning on the woolen system, and commission top making).

Woolen and worsted spinning systems are frequently studied together since both are used to spin wool. The primary differences between the two systems are that yarns spun on the worsted system are combed in order to remove the short fibers or noils and to make the individual fibers more parallel. This produces a yarn that is more tightly twisted and of finer texture. They are generally used to produce fabric more tightly woven, with a smoother finish and with a crisper hand.

Fabrics made from yarns spun on the woolen systems are typically characterized by softness or bulk. The fabrics are frequently knitted or woven into plain or twill weaves and are generally subjected to considerable finishing to enhance the texture.

Both of these systems are used to produce yarn of manufactured fibers and blends, as well as wool. For example, while very little carpet yarn is still wool, much of it is spun on the worsted system.

EXPLANATION OF TERMS

See explanation of terms at the beginning of this chapter.

Table 13. SUMMARY OF FIBERS CONSUMED IN WOOLEN SPINNING AND WORSTED COMBING: 1987 TO 1992

[Thousands of pounds]

Product description	1992	1991	1990	1989	1988	1987
All fibers ¹	926,035	836,695	811,512	742,872	730,022	720,105
Raw wool ^{2 3}	150,838	151,539	132,746	134,656	132,702	142,769
Apparel class.....	136,143	137,187	120,622	120,534	117,069	129,677
Woolen system.....	59,478	58,560	51,114	45,935	44,645	61,014
Worsted combing.....	76,665	78,627	69,508	74,599	72,424	68,663
Carpet class.....	14,695	14,352	12,124	14,122	15,633	13,092
Noils, reprocessed and reused wool, and other animal fibers ⁴	20,745	21,002	20,231	23,873	23,890	29,669
Other fibers ^{1 5}	754,452	664,154	658,535	584,343	573,430	547,667

Note: For 1990, a number of companies were added based on information in the 1987 Census of Manufactures. Data were received from these companies for 1990; therefore, the information shown for years prior to 1990 may not be directly comparable. These changes represent approximately 20 percent of the total fibers consumed on the "Woolen system" and "Worsted combing."

¹Includes manmade fiber top converted from tow without combing.

²Data are shown on a scoured basis for greasy wool.

³Shorn and pulled wool of the sheep does not include raw wool consumed in cotton system spinning. These data were withheld to avoid disclosing figures for individual companies.

⁴Includes mohair, alpaca, vicuna, and other specialty fibers, as well as tops and noils consumed in woolen spinning and mohair consumed in worsted combing. Does not include wool tops consumed in cotton system spinning.

⁵Includes cotton, jute, and other vegetable fibers. Data for product code 22993 62, which was included with "Other fibers" data in earlier publications, is now being included in the data for "Noils, reprocessed and reused wool, and other animal fibers."

Table 14. FIBERS CONSUMED IN WOOLEN SPINNING AND WORSTED COMBING,
BY QUARTER: 1992 AND 1991

[Thousands of pounds]

Product description	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992					
All fibers ¹	926,035	231,818	237,624	237,139	219,454
Raw wool ^{2 3}	150,838	40,931	38,737	36,726	34,444
Apparel class	136,143	36,351	35,145	33,581	31,066
Woolen system	59,478	15,910	15,588	14,225	13,755
Worsted combing	76,665	20,441	19,557	19,356	17,311
Carpet class ⁴	14,695	4,580	3,592	3,145	3,378
Noils, reprocessed and reused wool, and other animal fibers ⁵	20,745	5,541	5,951	5,350	3,903
Other fibers ¹	754,452	185,346	192,936	195,063	181,107
Nylon	479,097	112,856	124,976	126,219	115,046
Polyester	134,305	33,459	33,590	34,326	32,930
Acrylic and modacrylic	121,529	33,543	29,239	29,552	29,195
Other fibers ⁶	19,521	5,488	5,131	4,966	3,936
1991					
All fibers ¹	836,695	197,654	212,865	219,346	206,830
Raw wool ^{2 3}	151,539	34,667	40,229	39,139	37,504
Apparel class	137,187	31,582	37,111	34,578	33,916
Woolen system	58,560	13,621	16,055	14,553	14,331
Worsted combing	78,627	17,961	21,056	20,025	19,585
Carpet class ⁴	14,352	3,085	3,118	4,561	3,588
Noils, reprocessed and reused wool, and other animal fibers ⁵	21,002	5,147	5,620	5,298	4,937
Other fibers ¹	664,154	157,840	167,016	174,909	164,389
Nylon	436,248	102,208	112,703	116,652	104,685
Polyester	88,293	18,857	20,361	23,415	25,660
Acrylic and modacrylic	122,265	32,555	29,545	30,174	29,991
Other fibers ⁶	17,348	4,220	4,407	4,668	4,053

¹Includes top converted from manmade fiber tow without combing.²Data are shown on a scoured basis for greasy wool.³Shorn and pulled wool of the sheep does not include raw wool consumed in cotton system spinning.⁴Data for carpet and rug yarns, tops, noils, reprocessed wool, and other wool, except shorn and pulled, are included with carpet class raw wool in order to avoid disclosing figures for individual companies. These data represent less than 1/2 of 1 percent of the total carpet class raw wool.⁵Includes mohair, alpaca, vicuna, and other specialty fibers, as well as tops and noils consumed in woolen spinning and mohair and other fibers, except wool of the sheep consumed in worsted combing. Does not include wool tops consumed in cotton system spinning, which in 1992 amounted to 4,187 thousand pounds (52 weeks total) and in 1991 amounted to 5,221 thousand pounds (52 weeks total).⁶Includes cotton, jute, and other vegetable fibers. Data for product code 22993 62, which was included with "Other fibers" data in earlier publications, is now being included in the data for "Noils, reprocessed and reused wool, and other animal fibers."

Table 15. FIBERS CONSUMED IN WOOLEN SPINNING, BY QUARTER: 1992 AND 1991

[Thousands of pounds]

Product code	Product description	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992						
	Fibers consumed in woolen spinning ¹	792,752	195,047	204,643	203,761	189,301
	For yarns (except carpet and rug)	226,471	58,332	57,002	57,412	53,725
	Shorn and pulled wool of the sheep (domestic and foreign duty-paid)	59,478	15,910	15,588	14,225	13,755
00214 61	60S and finer	33,878	8,249	8,645	8,492	8,492
00214 62	Coarser than 60S	25,600	7,661	6,943	5,733	5,263
	Other wool	13,917	3,583	4,012	3,502	2,820
02299 38	Sheep (tops, noils, etc.)	13,133	3,324	3,787	3,367	2,655
00214 71	Other (mohair, alpaca, vicuna, etc.)	784	259	225	135	165
02294 07	Reprocessed wool and reused wool	4,560	1,296	1,385	1,346	533
	Other fibers	148,516	37,543	36,017	38,339	36,617
02824 14	Nylon	23,173	5,076	5,634	6,851	5,612
02824 29	Polyester	28,712	7,065	6,558	7,172	7,917
02824 25	Acrylic and modacrylic	78,302	20,319	18,972	19,589	19,422
00100 17	All other fibers, including rayon and acetate	18,329	5,083	4,853	4,727	3,666
	For carpet and rug yarns	566,281	136,715	147,641	146,349	135,576
00214 51	Shorn and pulled wool of the sheep (foreign, duty-free) AND					
02299 36	Tops, noils, mohair, reused and reprocessed wool, and other wool (except shorn or pulled)	14,695	4,580	3,592	3,145	3,378
	Other fibers	551,586	132,135	144,049	143,204	132,198
02824 13	Nylon	455,924	107,780	119,342	119,368	109,434
02824 25	Polyester	(D)	(D)	(D)	(D)	(D)
02824 24	Acrylic and modacrylic	(D)	(D)	(D)	(D)	(D)
00100 14	All other fibers, including rayon and acetate	(D)	(D)	(D)	(D)	(D)
1991						
	Fibers consumed in woolen spinning ¹	696,693	164,285	175,569	184,331	172,508
	For yarns (except carpet and rug)	217,003	53,535	54,574	55,363	53,531
	Shorn and pulled wool of the sheep (domestic and foreign duty-paid)	58,560	13,621	16,055	14,553	14,331
00214 61	60S and finer	31,961	6,882	9,005	7,908	8,166
00214 62	Coarser than 60S	26,599	6,739	7,050	6,645	6,165
	Other wool	13,185	3,274	3,450	3,061	3,400
02299 38	Sheep (tops, noils, etc.)	12,340	3,048	3,287	2,847	3,158
00214 71	Other (mohair, alpaca, vicuna, etc.)	845	226	163	214	242
02294 07	Reprocessed wool and reused wool	5,290	1,134	1,513	1,588	1,055
	Other fibers	139,968	35,506	33,556	36,161	34,745
02824 14	Nylon	21,474	4,498	5,106	5,778	6,092
02824 29	Polyester	26,817	6,783	6,424	6,960	6,650
02824 25	Acrylic and modacrylic	75,947	20,411	18,033	19,155	18,348
00100 17	All other fibers, including rayon and acetate	15,730	3,814	3,993	4,268	3,655
	For carpet and rug yarns	479,690	110,750	120,995	128,968	118,977
00214 51	Shorn and pulled wool of the sheep (foreign, duty-free) AND					
02299 36	Tops, noils, mohair, reused and reprocessed wool, and other wool (except shorn or pulled)	14,352	3,085	3,118	4,561	3,588
	Other fibers	465,338	107,665	117,877	124,407	115,389
02824 13	Nylon	414,774	97,710	107,597	110,874	98,593
02824 25	Polyester	(D)	(D)	(D)	(D)	(D)
02824 24	Acrylic and modacrylic	(D)	(D)	(D)	(D)	(D)
00100 14	All other fibers, including rayon and acetate	(D)	(D)	(D)	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

¹Data are shown on a scoured basis for greasy wools.

Table 16. **PRODUCTION OF TOPS AND NOILS COMBED AND MANMADE TOW CONVERTED TO TOP WITHOUT COMBING, BY QUARTER: 1992 AND 1991**

[Thousands of pounds]

Product code	Product description	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992						
	Tops and noils combed	78,933	21,103	20,111	19,858	17,861
	Top production	71,813	19,256	18,330	18,008	16,219
	Wool of the sheep (domestic and foreign duty-paid)	(D)	(D)	(D)	(D)	(D)
22993 21	60S and finer	53,226	14,529	13,874	12,930	11,893
22993 24	Coarser than 60S	(D)	(D)	(D)	(D)	(D)
22993 31	All other fibers, including mohair	(D)	(D)	(D)	(D)	(D)
	Noil production	7,120	1,847	1,781	1,850	1,642
	Wool of the sheep (domestic and foreign duty-paid)	(D)	(D)	(D)	(D)	(D)
22993 51	60S and finer	5,269	1,414	1,347	1,317	1,191
22993 54	Coarser than 60S	(D)	(D)	(D)	(D)	(D)
22993 62	All other fibers, including mohair	(D)	(D)	(D)	(D)	(D)
	Manmade tow converted to top without combing..	54,350	15,668	12,870	13,520	12,292
22993 75	Polyester	(D)	(D)	(D)	(D)	(D)
22993 73	Acrylic fibers	(D)	(D)	(D)	(D)	(D)
22993 76	Manmade fibers (except polyester or acrylic) ...	(D)	(D)	(D)	(D)	(D)
1991						
	Tops and noils combed	81,154	18,700	21,713	20,674	20,067
	Top production	73,706	17,061	19,658	18,738	18,249
	Wool of the sheep (domestic and foreign duty-paid)	(D)	(D)	(D)	(D)	(D)
22993 21	60S and finer	51,209	13,035	13,333	12,024	12,817
22993 24	Coarser than 60S	(D)	(D)	(D)	(D)	(D)
22993 31	All other fibers, including mohair	(D)	(D)	(D)	(D)	(D)
	Noil production	7,448	1,639	2,055	1,936	1,818
	Wool of the sheep (domestic and foreign duty-paid)	(D)	(D)	(D)	(D)	(D)
22993 51	60S and finer	5,312	1,265	1,470	1,276	1,301
22993 54	Coarser than 60S	(D)	(D)	(D)	(D)	(D)
22993 62	All other fibers, including mohair	(D)	(D)	(D)	(D)	(D)
	Manmade tow converted to top without combing..	58,848	14,669	15,583	14,341	14,255
22993 75	Polyester	(D)	(D)	(D)	(D)	(D)
22993 73	Acrylic fibers	(D)	(D)	(D)	(D)	(D)
22993 76	Manmade fibers (except polyester or acrylic) ...	(D)	(D)	(D)	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

HISTORICAL NOTE

Data on the consumption of staple fibers on the woolen and worsted systems have been collected by the Bureau of Census since 1919. Prior to 1990 the survey was conducted on a monthly basis. Beginning in 1991 the survey became quarterly. Historical data may be obtained from Current Industrial Reports available at your local

Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Maria Dixon, 301-763-5895.

2.3 YARN PRODUCTION (TEXTURED AND SPUN)

INTRODUCTION

Yarn production is the first stage in the textile manufacturing process. Yarn is a continuous strand of textile fibers and is the basic material that is made into fabric, thread, twine, or cable. It can be woven, knitted, crocheted, braided, etc..

There are two basic classes of yarn: spun yarn or continuous filament yarn. This subsection of the report provides data on spun yarn and textured filament yarn. Textured yarn has been either bulked, crimped, heat set, or

subjected to some other process intended to give the yarn fullness, stretch, etc. Data are not included which relate to the production of flat filament yarn, which is generally considered to be a chemical manufacturing process

The data are presented by end use, by fiber, and by spinning system.

EXPLANATION OF TERMS

See explanation of terms at the beginning of this chapter.

Table 17. **SUMMARY OF YARN PRODUCTION: 1980 TO 1992**

[Millions of pounds]

Year	Spun yarn			Textured, crimped, or bulked yarn		
	Total	For sale	For own use or commission	Total	For sale	For own use or commission
1992.....	7,357.2	2,522.4	4,834.8	3,109.4	1,906.5	1,202.9
1991.....	6,875.1	2,332.6	4,542.5	2,999.7	1,996.9	1,002.8
1990.....	6,493.3	2,190.0	4,303.3	2,811.6	1,874.8	936.8
1989.....	6,759.3	2,289.7	4,469.6	2,789.7	1,898.7	891.0
1988.....	6,636.4	2,287.8	4,348.6	2,617.5	1,849.8	767.7
1987.....	6,731.4	2,303.3	4,428.1	2,470.9	1,790.2	680.7
1986.....	6,154.1	2,095.8	4,058.4	2,273.5	1,682.2	591.3
1985.....	5,704.3	1,836.5	3,867.8	2,403.1	1,758.1	645.0
1984.....	5,832.2	1,884.5	3,947.7	2,333.5	1,703.9	629.6
1983.....	6,079.1	2,037.7	4,041.4	2,426.7	1,730.7	696.0
1982.....	5,284.3	1,681.6	3,602.6	2,137.1	1,584.1	553.0
1981.....	5,625.7	1,650.1	3,975.6	2,126.9	1,591.4	535.5
1980.....	5,977.7	1,783.1	4,194.6	2,173.5	1,585.9	587.6

Table 18. SUMMARY OF SPUN YARN PRODUCTION, BY FIBER AND END USE OF DISTRIBUTION: 1992 AND 1991

[Thousands of pounds]

Principal fiber	1992			1991		
	Total	For sale	For own use or commission	Total	For sale	For own use or commission
Spun yarn	7,357,229	2,522,438	4,834,791	6,875,106	2,332,647	4,542,459
Cotton	3,699,339	1,507,273	2,192,066	3,381,290	1,360,277	2,021,013
Carded	3,282,471	1,276,004	2,006,467	2,928,965	1,092,852	1,836,113
85 percent or more cotton	2,995,283	1,116,303	1,878,980	2,587,191	896,363	1,690,828
Other chiefly cotton blends	287,188	159,701	127,487	341,774	196,489	145,285
Combed	416,868	231,269	185,599	452,325	267,425	184,900
85 percent or more cotton	324,631	178,563	146,068	366,243	216,188	150,055
Other chiefly cotton blends	92,237	52,706	39,531	86,082	51,237	34,845
Wool and chiefly wool blends	135,220	34,581	100,639	134,768	27,045	107,723
Woolen	85,999	20,786	65,213	77,901	20,242	57,659
Worsted	49,221	13,795	35,426	56,867	6,803	50,064
Cellulosic (rayon and/or acetate)	224,534	84,649	139,885	227,497	95,091	132,406
85 percent or more rayon and/or acetate	177,348	69,687	107,661	190,521	80,897	109,624
Other chiefly rayon and/or acetate blends	47,186	14,962	32,224	36,976	14,194	22,782
Noncellulosic	3,298,136	895,935	2,402,201	3,131,551	850,234	2,281,317
85 percent or more acrylic	208,251	164,537	43,714	185,290	132,821	52,469
Other chiefly acrylic blends:						
Mixed with cotton	15,733	(D)	(D)	20,138	(D)	(D)
Mixed with wool	701	412	289	1,184	1,061	123
Mixed with other fibers	32,289	(D)	(D)	28,378	(D)	(D)
85 percent or more nylon	804,153	153,112	651,041	769,609	155,716	613,893
Other chiefly nylon blends	25,182	(D)	(D)	50,251	(D)	(D)
85 percent or more polyester	493,259	220,412	272,847	475,289	229,163	246,126
Other chiefly polyester blends:						
Mixed with cotton	1,469,510	204,976	1,264,534	1,370,705	208,357	1,162,348
Mixed with wool	22,162	1,013	21,149	24,256	1,069	23,187
Mixed with other fibers	117,593	32,761	84,832	106,865	13,211	93,654
All other manmade fibers ¹	109,303	61,729	47,574	99,586	52,297	47,289

(D) Data withheld to avoid disclosing figures for individual companies. ¹ Revised by 5 percent or more from previously published figures.¹Data for "Silk and other natural fibers" are combined with "All other manmade fibers" to avoid disclosure for individual companies.

Table 19. PRODUCTION OF SPUN YARN, BY FIBER AND END USE OF DISTRIBUTION: 1992 AND 1991

[Thousands of pounds]

Principal fiber	1992			1991		
	Total	For sale	For own use or commission	Total	For sale	For own use or commission
Weaving yarn (except carpet)	3,596,216	389,027	3,207,189	3,377,395	351,389	3,026,006
Cotton	2,016,359	175,871	1,840,488	1,881,789	169,818	1,711,971
Carded	1,890,690	171,602	1,719,088	1,756,334	165,675	1,590,659
85 percent or more cotton	1,781,469	157,264	1,624,205	1,580,218	122,077	1,458,141
Other chiefly cotton blends	109,221	14,338	94,883	176,116	43,598	132,518
Combed	125,669	4,269	121,400	125,455	4,143	121,312
85 percent or more cotton	86,108	3,902	82,206	92,526	3,953	88,573
Other chiefly cotton blends	39,561	367	39,194	32,929	190	32,739
Wool and chiefly wool blends	106,854	21,258	85,596	105,091	14,591	90,500
Woolen	65,817	13,082	52,735	55,556	11,161	44,395
Worsted	41,037	8,176	32,861	49,535	3,430	46,105
Cellulosic (rayon and/or acetate)	208,862	72,149	136,713	206,816	75,703	131,113
85 percent or more rayon and/or acetate	164,732	58,724	106,008	176,431	67,898	108,533
Other chiefly rayon and/or acetate blends	44,130	13,425	30,705	30,385	7,805	22,580
Noncellulosic	1,264,141	119,749	1,144,392	1,183,699	91,277	1,092,422
85 percent or more acrylic	35,449	10,254	25,195	34,475	7,973	26,502
Other chiefly acrylic blends:						
Mixed with cotton	7,660	(D)	(D)	4,752	(D)	(D)
Mixed with wool	299	(D)	(D)	190	(D)	(D)
Mixed with other fibers	4,406	638	3,768	2,856	605	2,251
85 percent or more nylon	18,438	(D)	(D)	23,753	9,346	14,407
Other chiefly nylon blends	8,972	(D)	(D)	13,787	(D)	(D)
85 percent or more polyester	131,466	50,213	81,253	129,541	39,294	90,247
Other chiefly polyester blends:						
Mixed with cotton	898,169	18,536	879,633	801,537	17,399	784,138
Mixed with wool	20,428	(D)	(D)	23,364	(D)	(D)
Mixed with other fibers	88,686	11,530	77,156	94,925	4,743	90,182
All other manmade fibers ¹	50,168	12,032	38,136	54,519	10,950	43,569
Machine knitting yarn (except carpet)	2,484,493	1,725,131	759,362	2,309,606	1,578,242	731,364
Cotton	1,612,403	1,272,056	340,347	1,430,314	1,133,492	296,822
Carded	1,333,216	1,050,115	283,101	1,117,485	876,435	241,050
85 percent or more cotton	1,160,528	909,043	251,485	963,842	734,991	228,851
Other chiefly cotton blends	172,688	141,072	31,616	153,643	141,444	12,199
Combed	279,187	221,941	57,246	312,829	257,057	55,772
85 percent or more cotton	228,617	(D)	(D)	262,930	(D)	(D)
Other chiefly cotton blends	50,570	(D)	(D)	49,899	(D)	(D)
Wool and chiefly wool blends	9,012	6,923	2,089	8,028	5,472	2,556
Woolen	4,230	(D)	(D)	4,491	(D)	(D)
Worsted	4,782	(D)	(D)	3,537	(D)	(D)
Cellulosic (rayon and/or acetate)	11,084	8,571	2,513	16,640	15,881	759
85 percent or more rayon and/or acetate	(D)	(D)	(D)	(D)	(D)	(D)
Other chiefly rayon and/or acetate blends	(D)	(D)	(D)	(D)	(D)	(D)
Noncellulosic	851,994	437,581	414,413	854,624	423,397	431,227
85 percent or more acrylic	142,106	(D)	(D)	120,766	(D)	(D)
Other chiefly acrylic blends:						
Mixed with cotton	(D)	(D)	(D)	15,349	(D)	(D)
Mixed with wool	(D)	(D)	(D)	(D)	(D)	(D)
Mixed with other fibers	(D)	(D)	-	(D)	(D)	(D)
85 percent or more nylon	7,295	(D)	(D)	15,271	(D)	(D)
Other chiefly nylon blends	(D)	(D)	(D)	(D)	(D)	(D)
85 percent or more polyester	115,970	98,399	17,571	120,856	109,487	11,369
Other chiefly polyester blends:						
Mixed with cotton	533,257	161,047	372,210	539,646	171,289	368,357
Mixed with wool	(D)	(D)	(D)	(D)	(D)	(D)
Mixed with other fibers	(D)	9,428	(D)	(D)	6,831	(D)
All other manmade fibers ¹	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 19. PRODUCTION OF SPUN YARN, BY FIBER AND END USE OF DISTRIBUTION: 1992 AND 1991—Continued

[Thousands of pounds]

Principal fiber	1992			1991		
	Total	For sale	For own use or commission	Total	For sale	For own use or commission
Carpet and rug yarns	1,083,088	263,745	819,343	1,013,458	276,003	737,455
Cotton	35,854	(D)	(D)	'32,781	(D)	(D)
Carded	35,854	(D)	(D)	'32,781	(D)	(D)
85 percent or more cotton	(D)	(D)	(D)	(D)	(D)	(D)
Other chiefly cotton blends	(D)	(D)	-	(D)	(D)	-
Combed	-	-	-	-	-	-
85 percent or more cotton	-	-	-	-	-	-
Other chiefly cotton blends	-	-	-	-	-	-
Wool and chiefly wool blends	(D)	(D)	(D)	(D)	(D)	(D)
Woolen	(D)	(D)	(D)	(D)	(D)	(D)
Worsted	(D)	(D)	(D)	(D)	(D)	(D)
Cellulosic (rayon and/or acetate)	(D)	(D)	-	(D)	(D)	-
85 percent or more rayon and/or acetate	-	-	-	(D)	(D)	-
Other chiefly rayon and/or acetate blends	(D)	(D)	-	(D)	(D)	-
Noncellulosic	1,029,822	222,774	807,048	962,443	237,121	725,322
85 percent or more acrylic	(D)	(D)	(D)	(D)	(D)	(D)
Other chiefly acrylic blends:						
Mixed with cotton	-	-	-	(D)	(D)	-
Mixed with wool	-	-	-	-	-	-
Mixed with other fibers	-	-	-	-	-	-
85 percent or more nylon	778,304	139,378	638,926	730,201	140,394	'589,807
Other chiefly nylon blends	(D)	(D)	-	22,214	22,214	-
85 percent or more polyester	217,112	61,329	155,783	196,879	68,905	127,974
Other chiefly polyester blends:						
Mixed with cotton	(D)	(D)	(D)	(D)	(D)	-
Mixed with wool	-	-	-	-	-	-
Mixed with other fibers	(D)	(D)	(D)	(D)	(D)	(D)
All other manmade fibers ¹	(D)	(D)	(D)	(D)	(D)	(D)
Hand knitting yarns	40,115	32,133	7,982	46,869	35,650	11,219
Cotton	6,665	(D)	(D)	7,299	(D)	(D)
Carded	(D)	(D)	(D)	(D)	(D)	(D)
85 percent or more cotton	(D)	(D)	(D)	(D)	(D)	(D)
Other chiefly cotton blends	-	-	-	(D)	(D)	-
Combed	(D)	(D)	(D)	(D)	(D)	(D)
85 percent or more cotton	(D)	(D)	(D)	(D)	(D)	(D)
Other chiefly cotton blends	-	-	-	-	-	-
Wool and chiefly wool blends	(D)	(D)	(D)	(D)	(D)	(D)
Woolen	(D)	(D)	-	1,613	(D)	(D)
Worsted	(D)	(D)	(D)	(D)	(D)	(D)
Cellulosic (rayon and/or acetate)	(D)	-	(D)	(D)	(D)	(D)
85 percent or more rayon and/or acetate	(D)	-	(D)	(D)	(D)	(D)
Other chiefly rayon and/or acetate blends	-	-	-	-	-	-
Noncellulosic	32,655	(D)	(D)	37,463	(D)	(D)
85 percent or more acrylic	21,685	(D)	(D)	'27,360	(D)	(D)
Other chiefly acrylic blends:						
Mixed with cotton	-	-	-	-	-	-
Mixed with wool	(D)	(D)	-	(D)	(D)	(D)
Mixed with other fibers	(D)	(D)	-	(D)	(D)	(D)
85 percent or more nylon	-	-	-	-	-	-
Other chiefly nylon blends	(D)	(D)	-	-	-	-
85 percent or more polyester	-	-	-	-	-	-
Other chiefly polyester blends:						
Mixed with cotton	-	-	-	-	-	-
Mixed with wool	-	-	-	-	-	-
Mixed with other fibers	-	-	-	-	-	-
All other manmade fibers ¹	(D)	(D)	(D)	(D)	(D)	-

See footnotes at end of table.

Table 19. **PRODUCTION OF SPUN YARN, BY FIBER AND END USE OF DISTRIBUTION: 1992 AND 1991—Continued**

[Thousands of pounds]

Principal fiber	1992			1991		
	Total	For sale	For own use or commission	Total	For sale	For own use or commission
All other spun yarns.....	153,317	112,402	40,915	'127,778	91,363	'36,415
Cotton	28,058	19,960	8,098	'29,107	20,844	'8,263
Carded.....	19,589	(D)	(D)	'18,589	(D)	(D)
85 percent or more cotton.....	(D)	(D)	(D)	(D)	(D)	(D)
Other chiefly cotton blends.....	(D)	(D)	(D)	(D)	(D)	(D)
Combed.....	8,459	(D)	(D)	10,518	(D)	(D)
85 percent or more cotton.....	(D)	(D)	(D)	(D)	(D)	(D)
Other chiefly cotton blends.....	(D)	(D)	-	(D)	(D)	-
Wool and chiefly wool blends.....	(D)	(D)	(D)	(D)	(D)	(D)
Woolen	(D)	(D)	(D)	(D)	(D)	(D)
Worsted.....	(D)	(D)	(D)	(D)	(D)	(D)
Cellulosic (rayon and/or acetate).....	4,315	(D)	(D)	'3,672	(D)	(D)
85 percent or more rayon and/or acetate	(D)	(D)	(D)	(D)	(D)	(D)
Other chiefly rayon and/or acetate blends	(D)	(D)	(D)	(D)	(D)	(D)
Noncellulosic	119,524	87,848	31,676	'93,322	66,584	26,738
85 percent or more acrylic	(D)	(D)	(D)	(D)	(D)	(D)
Other chiefly acrylic blends:						
Mixed with cotton	(D)	(D)	-	-	-	-
Mixed with wool.....	-	-	-	(D)	(D)	-
Mixed with other fibers.....	-	-	-	(D)	(D)	-
85 percent or more nylon	(D)	(D)	(D)	(D)	(D)	(D)
Other chiefly nylon blends.....	(D)	(D)	-	(D)	(D)	-
85 percent or more polyester.....	28,711	(D)	(D)	28,013	(D)	(D)
Other chiefly polyester blends:						
Mixed with cotton	37,633	(D)	(D)	29,401	(D)	(D)
Mixed with wool.....	(D)	(D)	-	-	-	-
Mixed with other fibers.....	(D)	(D)	(D)	(D)	(D)	(D)
All other manmade fibers ¹	(D)	(D)	-	(D)	(D)	-

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. 'Revised by 5 percent or more from previously published figures.

¹Data for "Silk and other natural fibers" are combined with "All other manmade fibers" to avoid disclosure for individual companies.

Table 20. PRODUCTION OF SPUN YARN, BY STATE: 1992 AND 1991

[Thousands of pounds]

State	1992	1991
United States	7,357,229	6,875,106
Alabama	776,305	712,889
Georgia	1,634,036	'1,521,084
Kentucky	(D)	(D)
Maine	41,933	41,703
Massachusetts	9,604	10,644
Mississippi	(D)	(D)
North Carolina	2,812,564	2,596,607
Pennsylvania	38,019	32,876
South Carolina	1,420,969	1,365,706
Tennessee	153,834	143,617
Texas	92,750	'89,470
Virginia	170,952	'168,092
All other states	81,580	'84,322

(D) Data withheld to avoid disclosing figures for individual companies. 'Revised by 5 percent or more from previously published figures.

Table 21. PRODUCTION OF SPUN YARN, BY SPINNING SYSTEM AND END USE: 1992 AND 1991

[Thousands of pounds]

System of spinning	1992			1991		
	Total	For sale	For own use or commission	Total	For sale	For own use or commission
Total	7,357,229	2,522,438	4,834,791	6,875,106	2,332,647	4,542,459
Cotton system	6,021,234	2,108,986	3,912,248	5,620,365	1,934,261	3,686,104
Weaving (except carpet)	3,339,216	309,114	3,030,102	3,137,242	291,727	2,845,515
Machine knitting (except carpet)	2,364,816	1,607,888	756,928	2,185,106	1,464,676	720,430
Carpet and rug	196,822	117,157	79,665	'195,673	121,493	74,180
Hand knitting	11,514	(D)	(D)	14,601	(D)	(D)
All other uses	108,866	(D)	(D)	'87,743	(D)	(D)
Woolen system	159,116	27,580	131,536	128,742	22,204	106,538
Weaving (except carpet)	80,581	(D)	(D)	76,182	(D)	(D)
Machine knitting (except carpet)	4,991	3,084	1,907	4,426	2,681	1,745
Carpet and rug	72,644	11,206	61,438	46,571	7,308	39,263
Hand knitting	(D)	(D)	-	(D)	(D)	-
All other uses	(D)	(D)	(D)	(D)	(D)	(D)
Worsted system	998,692	292,242	706,450	958,213	285,160	673,053
Weaving (except carpet)	122,760	40,317	82,443	118,203	27,782	90,421
Machine knitting (except carpet)	97,377	(D)	(D)	95,602	(D)	(D)
Carpet and rug	747,166	126,353	620,813	711,598	138,879	'572,719
Hand knitting	28,410	(D)	-	31,638	(D)	(D)
All other uses	2,979	(D)	(D)	1,172	(D)	(D)
Other systems	178,187	93,630	84,557	'167,786	91,022	'76,764
Weaving (except carpet)	53,659	(D)	(D)	45,768	20,578	25,190
Machine knitting (except carpet)	17,309	(D)	(D)	24,472	24,472	-
Carpet and rug	66,456	(D)	(D)	'59,616	(D)	(D)
Hand knitting	(D)	(D)	-	(D)	(D)	-
All other uses	(D)	(D)	(D)	(D)	(D)	(D)

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. 'Revised by 5 percent or more from previously published figures.

Table 22. **PRODUCTION OF TEXTURED, CRIMPED, OR BULKED FILAMENT YARNS BY FIBER AND END USE: 1992 AND 1991**

Product description	1992			1991		
	Total	For sale	For own use or commission	Total	For sale	For own use or commission
Total.....	3,109,447	1,906,516	1,202,931	'2,999,641	'1,996,886	1,002,755
Nylon	2,031,325	1,274,175	757,150	'1,998,986	'1,406,038	'592,948
Polyester.....	713,505	481,836	231,669	662,039	426,250	235,789
Rayon and acetate	613	(D)	(D)	394	(D)	(D)
Other yarns.....	364,004	(D)	(D)	338,222	(D)	(D)
Weaving yarn (except carpet).....	504,093	282,937	221,156	'503,855	'293,596	210,259
Nylon	(D)	(D)	(D)	(D)	(D)	(D)
Polyester.....	372,968	(D)	(D)	362,462	(D)	(D)
Rayon and acetate	(D)	(D)	(D)	(D)	-	(D)
Other yarns.....	(D)	(D)	33,473	(D)	(D)	(D)
Knitting yarn (except carpet).....	550,401	496,515	53,886	'498,811	'440,909	57,902
Nylon	232,496	228,627	3,869	218,139	212,177	5,962
Polyester.....	317,378	267,686	49,692	277,956	226,040	51,916
Rayon and acetate	(D)	(D)	(D)	(D)	(D)	(D)
Other yarns.....	(D)	(D)	(D)	(D)	(D)	(D)
Carpet and rug yarn	1,987,758	1,067,690	920,068	1,939,537	'1,219,285	720,252
Nylon	1,691,773	951,977	739,796	1,664,501	'1,090,504	'573,997
Polyester.....	(D)	(D)	(D)	(D)	(D)	(D)
Rayon and acetate	-	-	-	-	-	-
Other yarns.....	(D)	(D)	(D)	(D)	(D)	(D)
All other uses.....	67,195	59,374	7,821	'57,438	'43,096	14,342
Nylon	(D)	(D)	(D)	(D)	(D)	(D)
Polyester.....	(D)	(D)	(D)	(D)	(D)	(D)
Rayon and acetate	(D)	-	(D)	(D)	-	(D)
Other yarns.....	(D)	(D)	-	(D)	(D)	-

- Represents zero.
published figures.

(D) Data withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously

Table 23. DOMESTIC PRODUCTION, IMPORTS, AND EXPORTS OF YARN: 1992 AND 1991

[Thousands of kilograms; value in thousands of dollars]

Product description and year	Total production (quantity)	Exports of domestic merchandise ¹		Percent exports to domestic production		Imports for consumption ²		Apparent consumption ⁴		Percent imports to apparent consumption	
		Quantity	Value	Quantity	Value	Quantity	Value ³	Quantity	Value	Quantity	Value
1992											
Spun yarn.	3,337,239	34,188	166,767	1.0	(NA)	81,874	353,209	3,384,925	(NA)	2.4	(NA)
Cotton	1,678,020	7,631	58,215	0.5	(NA)	45,770	192,671	1,716,160	(NA)	2.7	(NA)
85 percent or more cotton	1,505,913	7,110	55,500	0.5	(NA)	37,179	159,997	1,535,983	(NA)	2.4	(NA)
Carded	1,358,660	3,997	36,810	0.3	(NA)	31,849	128,323	1,386,513	(NA)	2.3	(NA)
Combed	147,253	3,113	18,690	2.1	(NA)	5,330	31,674	149,470	(NA)	3.6	(NA)
Other chiefly cotton blends	172,107	521	2,715	0.3	(NA)	8,591	32,674	180,177	(NA)	4.8	(NA)
Carded	130,268	309	1,294	0.2	(NA)	1,032	3,731	130,991	(NA)	0.8	(NA)
Combed	41,839	212	1,421	0.5	(NA)	7,560	28,943	49,186	(NA)	15.4	(NA)
Wool spun yarn	61,336	389	3,233	0.6	(NA)	2,750	36,799	63,697	(NA)	4.3	(NA)
Woolen	39,009	6	76	-	(NA)	1,148	9,952	40,151	(NA)	2.9	(NA)
Worsted	22,327	383	3,157	1.7	(NA)	1,603	26,847	23,546	(NA)	6.8	(NA)
Manmade spun yarn	1,597,883	26,168	105,319	1.6	(NA)	33,353	123,739	1,605,068	(NA)	2.1	(NA)
Cellulosic	101,849	5,205	19,927	5.1	(NA)	5,509	23,609	102,152	(NA)	5.4	(NA)
Noncellulosic	1,496,034	20,963	85,392	1.4	(NA)	27,845	100,130	1,502,916	(NA)	1.9	(NA)
Polyester	953,705	7,701	28,184	0.8	(NA)	9,567	37,703	955,571	(NA)	1.0	(NA)
85 percent or more polyester	223,742	3,039	9,948	1.4	(NA)	2,319	11,425	223,022	(NA)	1.0	(NA)
Other chiefly polyester blends	729,963	4,662	18,236	0.6	(NA)	7,248	26,278	732,548	(NA)	1.0	(NA)
Acrylic	116,563	3,867	10,498	3.3	(NA)	8,339	38,662	121,036	(NA)	6.9	(NA)
85 percent or more acrylic	94,463	2,332	6,871	2.5	(NA)	8,200	37,406	100,331	(NA)	8.2	(NA)
Other chiefly acrylic blends	22,101	1,535	3,627	6.9	(NA)	139	1,256	20,705	(NA)	0.7	(NA)
Nylon	376,186	4,612	23,376	1.2	(NA)	220	1,872	371,795	(NA)	0.1	(NA)
All other, including silk and other natural fibers	49,580	4,783	23,334	9.6	(NA)	9,719	21,893	54,515	(NA)	17.8	(NA)
Textured, bulked, or crimped filament yarn	1,410,445	62,549	243,730	4.4	(NA)	29,224	109,767	1,207,695	(NA)	2.4	(NA)
Polyester	323,646	33,729	100,064	10.4	(NA)	3,954	12,104	293,871	(NA)	1.3	(NA)
Nylon	921,409	26,339	133,889	2.9	(NA)	18,754	79,933	913,824	(NA)	2.1	(NA)
Other	165,390	2,481	9,777	1.5	(NA)	6,515	17,730	169,425	(NA)	3.8	(NA)
1991											
Spun yarn.	3,118,548	39,976	147,709	1.3	(NA)	54,020	271,203	3,112,591	(NA)	1.7	(NA)
Cotton spun yarn.	1,533,753	17,103	67,024	1.1	(NA)	37,135	164,291	1,553,785	(NA)	2.4	(NA)
Wool spun yarn	61,131	341	3,255	0.6	(NA)	3,277	41,676	64,066	(NA)	5.1	(NA)
Manmade spun yarn	1,523,664	22,532	77,430	1.5	(NA)	13,608	65,236	1,514,740	(NA)	0.9	(NA)
Cellulosic	103,193	8,246	26,796	8.0	(NA)	3,940	17,213	98,887	(NA)	4.0	(NA)
Noncellulosic	1,420,472	14,286	50,634	1.0	(NA)	9,668	48,023	1,415,853	(NA)	0.7	(NA)
Textured, bulked, or crimped filament yarn	2,814,621	(NA)	(NA)	-	(NA)	27,870	(NA)	2,785,833	(NA)	1.0	(NA)
Cellulosic	179	(NA)	(NA)	-	(NA)	-	(NA)	179	(NA)	0.0	(NA)
Noncellulosic	2,814,442	56,658	(NA)	2.0	(NA)	27,870	(NA)	2,785,654	(NA)	1.0	(NA)

Note: Detail may not add to total due to independent rounding.

- Represents zero. (NA) Not available.

¹Source: Bureau of Census report EM 545, *U.S. Exports*.²Source: Bureau of Census report IM 145, *U.S. Imports for Consumption*.³The dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus U.S. Import duties.⁴Apparent consumption is equal to domestic production plus imports minus exports.

HISTORICAL DATA

Data on the production of spun, textured, bulked, and crimped yarns have been collected by the Bureau of the Census since 1960. Historical data may be obtained from Current Industrial Reports at your Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100. Additional information (employment, payroll, cost of materials, capital expenditures, inventories, etc.) on these yarns is available in both

the census of manufactures and the annual survey of manufactures.

CONTACT FOR DATA USERS

For additional information about these data, contact Keith Featherstone, 301-763-2553.

FABRIC PRODUCTION

GENERAL

Although there are a number of ways to manufacture fabric, the two most common are knitting and weaving. The data collected on fabric production are for knitted and broadwoven fabric.

Quantity of Knit and Broadwoven Fabrics Produced: 1988 to 1992

[Thousands of pounds]

Year	Woven fabric produced	Knit fabric produced
1992.....	4,826	2,081
1991.....	4,563	1,963
1990.....	4,585	1,901
1989.....	4,730	1,935
1988.....	4,858	1,662

Note: Data for broadwoven fabrics were collected in thousands of square yards. The data shown here in pounds are based upon conversion ratios derived from the MC22T survey, Average Width and Length of Broadwoven Fabrics, issued February 1993.

The table in the preceding column is a summary of knit fabric production and broadwoven fabric production for the last 5 years.

Knitting is a method of constructing fabric by interlocking a series of loops of one or more yarns. The two main types of machine knitting are weft and warp. Data are presented, by fiber, for both types.

The data for woven fabric are only for broadwoven fabrics. Broadwoven fabrics are at least 12 inches wide. Although this is the majority of the fabric produced, it does exclude the narrow fabrics used for items such as seat belts, webbing, bindings, zippers, and labels. At one time, the Current Industrial Report series included narrow fabrics, but that survey was canceled in the late 1980's. The data on broadwoven fabrics are collected by type of weave and type of fiber. The categories for this, as with much of the textile data, are structured to be as compatible as possible with the data collected on imports and exports.

2.4 BROADWOVEN FABRICS

INTRODUCTION

The data shown in the following tables are collected in the MQ22T, Broadwoven Fabric, survey. The survey covers all companies manufacturing broadwoven fabrics (gray) in the United States, except those very small companies (generally with less than five employees) for which census

of manufactures data were derived from administrative records.

EXPLANATION OF TERMS

See explanation of terms and definitions of specific fabrics at the beginning of this chapter.

Table 24. **SUMMARY OF PRODUCTION OF BROADWOVEN GRAY FABRICS, BY TYPE OF FABRIC: 1988 TO 1992**

[Millions of square yards]

Quarter and Year	Chiefly cotton fabrics	Manmade fiber fabrics, including silk and manmade/wool blends	Chiefly wool fabric	Tire cord and tire cord fabrics
1992				
Fourth quarter.....	1,143.9	2,893.4	39.5	189.6
Third quarter.....	1,129.8	2,827.1	43.9	190.3
Second quarter.....	1,172.1	2,843.7	47.2	192.7
First quarter.....	1,153.8	2,762.2	45.7	190.3
1991				
Fourth quarter.....	1,093.3	2,751.1	41.5	186.2
Third quarter.....	1,081.6	2,644.7	41.4	175.1
Second quarter.....	1,147.9	2,675.6	48.7	180.8
First quarter.....	1,080.7	2,543.2	38.0	178.6
1990				
Fourth quarter.....	1,048.0	2,700.2	31.4	177.8
Third quarter.....	1,087.3	2,585.9	32.6	172.5
Second quarter.....	1,126.6	2,664.2	38.7	183.3
First quarter.....	1,201.5	2,712.2	38.0	184.7
1989				
Fourth quarter.....	1,105.8	2,714.6	37.0	161.4
Third quarter.....	1,134.3	2,670.0	40.1	172.0
Second quarter.....	1,191.8	2,782.2	50.9	179.3
First quarter.....	1,157.2	2,796.0	48.3	175.7
1988				
Fourth quarter.....	1,052.3	2,847.7	43.9	168.9
Third quarter.....	1,072.2	2,735.6	43.0	169.5
Second quarter.....	1,255.0	2,877.6	53.0	157.7
First quarter.....	1,252.1	2,908.8	50.6	153.8

Table 25. SUMMARY OF PRODUCTION AND LOOM ASSIGNMENTS OF BROADWOVEN GRAY FABRICS: 1992

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
	Cotton and chiefly cotton fabrics mixed mainly or solely with manmade fibers	27,048	4,599,666	29,435	1,153,832	30,066	1,172,091	28,938	1,129,836	27,048	1,143,907
2211B 00	Plain weaves	12,154	2,203,138	13,823	564,752	14,097	558,104	13,869	543,135	12,154	537,147
2211C 00	Twill weaves	7,239	1,456,542	7,281	355,278	7,547	367,141	7,233	359,969	7,239	374,154
2211D 00	All other weaves (except pile) . .	3,059	469,722	3,352	113,498	3,624	118,087	3,201	116,381	3,059	121,756
2211E 00	Pile fabrics	4,596	470,264	4,979	120,304	4,798	128,759	4,633	110,351	4,596	110,850
	Chiefly cotton fabrics mixed mainly or solely with other than manmade fibers	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Manmade fiber and silk gray broadwoven fabrics	57,056	11,326,410	58,725	2,762,206	59,561	2,843,731	57,837	2,827,117	57,056	2,893,356
2221B 00	85 percent or more filament rayon and/or acetate fabrics . .	5,701	777,246	6,904	199,816	6,733	205,086	6,483	195,974	5,701	176,370
2221C 00	85 percent or more filament fabrics (except rayon and/or acetate)	15,282	4,949,391	15,863	1,163,379	15,835	1,218,481	15,707	1,240,310	15,282	1,327,221
	85 percent or more spun yarn fabrics (except wool blends) . .	28,453	4,174,233	27,847	1,052,599	28,185	1,051,293	27,640	1,026,229	28,453	1,044,112
2221D 00	Plain weave (except pile)	21,993	3,355,037	21,279	856,901	21,363	843,594	20,950	822,731	21,993	831,811
2221E 00	Twill weave (except pile)	2,889	459,915	3,568	113,530	3,536	122,909	3,075	112,288	2,889	111,188
2221F 00	All other weaves (except pile)	3,571	359,281	3,000	82,168	3,286	84,790	3,615	91,210	3,571	101,113
2221G 00	Spun/filament yarn combinations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 10	Pile fabrics	640	50,610	708	12,306	710	14,234	686	12,556	640	11,514
2221H 2X	All other chiefly manmade fiber fabrics, including chiefly manmade fiber blends with wool	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 01	Silk fabrics	68	969	73	259	83	319	69	196	68	195
	Woolen and worsted fabrics	1,778	176,285	1,882	45,660	1,985	47,199	1,898	43,910	1,778	39,516

(D) Data withheld to avoid disclosing figures for individual companies.

Table 26. SUMMARY OF PRODUCTION OF BROADWOVEN FABRIC BY TEXTILE CATEGORY: 1992

[Thousands of square yards]

Product description	Production				
	Total	First quarter	Second quarter	Third quarter	Fourth quarter
Blue denim	781,948	191,776	189,697	189,369	211,106
All other yarn dyed fabric	564,398	127,268	149,934	149,039	138,157
Plain weave	123,132	24,919	30,870	37,149	30,194
Twill weave	165,912	36,626	49,505	43,722	36,059
All other weave	275,354	65,723	69,559	68,168	71,904
Cheesecloth and batistes	1,148,391	310,216	290,135	280,457	267,583
Duck	(D)	(D)	(D)	(D)	(D)
Oxfords	107,237	20,401	24,568	30,721	31,547
Pile fabrics	520,874	132,610	142,993	122,907	122,364
Special weave fabric	375,552	92,718	91,162	90,116	101,556
Other fabrics, chiefly cotton fiber:					
Print cloth	430,558	118,395	110,751	102,601	98,811
Poplin and broadcloth	52,616	12,606	13,021	13,625	13,364
Sheeting	690,348	156,490	174,222	176,559	183,077
Twills	512,257	127,641	128,905	127,529	128,182
Sateens	43,194	9,156	10,739	11,670	11,629
Other fabrics, chiefly manmade fiber:					
Manmade/wool blends	(D)	(D)	(D)	(D)	(D)
85 percent or more filament yarn fabrics:					
Typewriter fabric	105,398	28,719	28,295	25,940	22,444
Other nylon	441,416	110,902	117,535	112,084	100,895
Rayon and acetate	777,246	199,816	205,086	195,974	176,370
Polyester	786,997	186,689	205,758	205,824	188,726
Glass fiber	362,444	91,732	100,376	88,239	82,097
All other	3,255,592	745,927	767,054	808,740	933,871
85 percent or more spun yarn fabrics:					
Print cloth	713,992	176,111	174,230	176,927	186,724
Poplin and broadcloth	573,558	149,987	139,733	135,899	147,939
Sheeting	1,779,590	463,216	456,882	431,743	427,749
Twills and sateens	484,554	120,629	129,083	118,172	116,670
Spun filament combinations (except blue denim):					
Print cloth	404,424	97,189	105,222	99,949	102,064
Poplin and broadcloth	307,136	67,428	78,143	84,067	77,498
Sheeting	127,172	38,439	32,564	29,100	27,069
Twills and sateens	107,991	23,977	27,804	29,719	26,491
Other	347,300	86,389	90,457	86,681	83,773
Wool fabrics	176,285	45,660	47,199	43,910	39,516
Silk fabrics	969	259	319	196	195

(D) Data withheld to avoid disclosing figures for individual companies.

*Revised by 5 percent or more from previously published figures.

Table 27. **PRODUCTION AND LOOM ASSIGNMENT OF 85 PERCENT OR MORE SPUN YARN FABRICS AND SPUN/FILAMENT COMBINATIONS, CHIEFLY COTTON OR MANMADE FIBERS, EXCLUDING BLENDS OF WOOL, SILK, AND CHIEFLY COTTON/OTHER VEGETABLE FIBERS AND PILE FABRICS: 1992**

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
2211B 02	Tobacco, cheese, and bandage cloth	3,420	1,175,025	3,305	316,754	3,087	297,470	3,212	286,493	3,420	274,308
2221D 03	More than 50 percent cotton	2,644	956,936	2,724	261,156	2,583	241,361	2,678	231,882	2,644	222,537
2221D 04	Chiefly spun polyester mixed with cotton	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 05	Chiefly spun rayon and/or acetate	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 05	All other fabrics, 85 percent or more spun yarn	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211B 05	Spun-filament combinations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221G 04	Chiefly cotton	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221G 04	Chiefly manmade	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211B 12	Print cloth	11,613	1,549,021	13,315	391,695	13,242	390,232	12,883	379,491	11,613	387,603
2221D 13	More than 50 percent cotton	4,322	430,395	5,999	118,395	5,830	110,570	5,644	102,615	4,322	98,815
2221D 15	Chiefly spun polyester mixed with cotton	5,024	617,541	5,113	153,637	4,966	151,394	4,870	149,696	5,024	162,814
2221D 16	Chiefly spun polyester mixed with rayon	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 18	Chiefly spun rayon and/or acetate	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 18	All other fabrics, 85 percent or more spun yarn	569	63,602	379	12,676	434	13,856	618	19,537	569	17,533
2211B 14	Spun/filament combinations	1,519	404,634	1,508	97,189	1,706	105,432	1,546	99,949	1,519	102,064
2221G 07	Chiefly cotton	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221G 07	Chiefly manmade	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211B 21	Poplin and broadcloth	7,227	1,020,358	6,352	249,291	6,599	253,955	6,780	259,049	7,227	258,063
2211B 25	More than 50 percent cotton	264	59,710	424	14,966	438	14,984	411	15,225	264	14,535
2211B 25	Weighing 5.9 ounces or less per square yard.	211	41,925	337	11,977	334	10,009	337	10,716	211	9,223
2211B 30	Carded	88	15,525	165	4,088	149	4,720	165	3,972	88	2,745
2211B 30	Combed	123	26,400	172	7,889	185	5,289	172	6,744	123	6,478
2221D 23	Weighing more than 5.9 ounces per square yard.	53	17,785	87	2,989	104	4,975	74	4,509	53	5,312
2221D 23	Chiefly spun polyester mixed with cotton	4,615	557,949	3,813	136,101	4,170	134,807	4,295	143,728	4,615	143,313
2221D 25	Weighing 5.0 ounces or less per square yard.	4,441	513,019	3,628	126,779	3,926	125,393	3,991	130,129	4,441	130,718
2221D 25	Carded	3,540	363,575	2,986	93,624	3,100	89,148	3,316	90,079	3,540	90,724
2221D 27	Combed	901	149,444	642	33,155	826	36,245	675	40,050	901	39,994
2221D 31	Weighing more than 5.0 ounces per square yard.	174	44,930	185	9,322	244	9,414	304	13,599	174	12,595
2221D 33	Carded	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 33	Combed	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 34	Chiefly spun rayon and/or acetate	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 34	All other fabrics, 85 percent or more spun yarn	477	65,437	623	23,983	474	20,469	378	9,357	477	11,628
2211B 35	Spun/filament combinations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221G 19	Chiefly cotton	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221G 19	Chiefly manmade	1,293	307,136	1,216	67,428	1,284	78,143	1,339	84,067	1,293	77,498

See footnotes at end of table.

Table 27. **PRODUCTION AND LOOM ASSIGNMENT OF 85 PERCENT OR MORE SPUN YARN FABRICS AND SPUN/FILAMENT COMBINATIONS, CHIEFLY COTTON OR MANMADE FIBERS, EXCLUDING BLENDS OF WOOL, SILK, AND CHIEFLY COTTON/OTHER VEGETABLE FIBERS AND PILE FABRICS: 1992—Continued**

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
2211B 41	Lawns, voiles, and batistes... More than 50 percent cotton	109	3,654	88	553	97	641	113	981	109	1,479
2221D 41	Chiefly spun polyester mixed with cotton	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 44	Chiefly spun rayon and/or acetate	(D)	(D)	-	-	-	-	-	-	(D)	(D)
2221D 42	All other fabrics, 85 percent or more spun yarn	-	-	-	-	-	-	-	-	-	-
	Spun/filament combinations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211B 43	Chiefly cotton	-	-	-	-	-	-	-	-	-	-
2221G 28	Chiefly manmade	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Duck, including taped warp duck	635	68,122	607	14,553	636	16,801	579	15,158	635	21,610
2211B 71	More than 50 percent cotton	246	33,778	260	7,480	269	8,541	241	8,175	246	9,582
2221D 89	Chiefly spun polyester mixed with cotton	133	9,057	141	2,438	130	2,201	132	2,091	133	2,327
2221D 91	All other fabrics, 85 percent or more spun yarn	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Spun/filament combinations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211B 75	Chiefly cotton	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221B 77	Chiefly manmade	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211B 45	Bedsheeting	11,022	1,897,106	11,130	473,445	11,680	479,890	10,999	471,109	11,022	472,662
	More than 50 percent cotton	2,618	397,495	2,436	90,518	2,761	101,127	2,760	104,975	2,618	100,875
	Chiefly spun polyester mixed with cotton	7,566	1,320,075	7,740	338,643	7,959	332,019	7,389	321,669	7,566	327,744
2221D 43	Carded	1,757	417,736	1,476	92,206	1,924	109,655	1,742	108,263	1,757	107,612
2221D 45	Combed	5,809	902,339	6,264	246,437	6,035	222,364	5,647	213,406	5,809	220,132
2221D 46	Chiefly spun rayon and/or acetate	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 47	All other fabrics, 85 percent or more spun yarn	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Spun/filament combinations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211B 47	Chiefly cotton	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221G 33	Chiefly manmade	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	All other sheeting, including osnaburgs	3,637	712,032	3,899	182,554	3,902	184,558	3,816	173,085	3,637	171,835
2211B 61	More than 50 percent cotton	1,391	223,180	1,520	54,853	1,634	55,371	1,466	52,023	1,391	60,933
	Weighing 5.9 ounces or less per square yard... Weighing more than 5.9 ounces per square yard	1,061	154,333	1,207	39,285	1,244	39,309	1,060	34,930	1,061	40,809
2211B 63	Blanketing	330	68,847	313	15,568	390	16,062	406	17,093	330	20,124
2211B 65	All other fabric	221	47,217	174	11,323	185	10,753	225	11,000	221	14,141
		109	21,630	139	4,245	205	5,309	181	6,093	109	5,983

See footnotes at end of table.

Table 27. **PRODUCTION AND LOOM ASSIGNMENT OF 85 PERCENT OR MORE SPUN YARN FABRICS AND SPUN/FILAMENT COMBINATIONS, CHIEFLY COTTON OR MANMADE FIBERS, EXCLUDING BLENDS OF WOOL, SILK, AND CHIEFLY COTTON/OTHER VEGETABLE FIBERS AND PILE FABRICS:**
1992—Continued

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
	All other sheeting, including osnaburgs—Cont.										
	85 percent or more spun polyester.....	162	24,263	156	6,137	156	5,862	153	5,800	162	6,464
2221D 63	Blanketing.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 65	All other fabric.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Chiefly spun polyester mixed with cotton.....	1,355	290,181	1,465	79,585	1,359	79,058	1,393	70,709	1,355	60,829
2221D 73	Weighing 5.0 ounces or less per square yard....	1,133	246,694	1,212	66,754	1,106	68,109	1,141	60,359	1,133	51,472
2221D 75	Weighing more than 5.0 ounces per square yard.	222	43,487	253	12,831	253	10,949	252	10,350	222	9,357
	Chiefly spun acrylic.....	133	40,041	143	7,257	140	10,992	189	10,909	133	10,883
2221D 81	Blanketing.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 83	All other fabric.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 84	Chiefly spun rayon and/or acetate.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 85	All other fabrics, 85 percent or more spun yarn.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Spun/filament combinations.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211B 67	Chiefly cotton.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221G 45	Chiefly manmade.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Blue denim.....	3,452	781,948	3,338	191,776	3,195	189,697	3,486	189,369	3,452	211,106
	More than 50 percent cotton.....	3,333	758,893	3,248	186,086	3,102	184,576	3,363	183,478	3,333	204,753
2211C 01	Weighing 10.7 ounces or less per square yard....	401	84,386	433	22,306	337	19,091	332	18,947	401	24,042
2211C 03	Weighing more than 10.7 ounces per square yard.	2,932	674,507	2,815	163,780	2,765	165,485	3,031	164,531	2,932	180,711
2221E 03	Chiefly spun polyester mixed with cotton.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Spun/filament combinations.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211G 05	Chiefly cotton.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221G 46	Chiefly manmade.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	All other denim.....	875	192,993	828	43,728	1,055	54,192	832	51,994	875	43,079
	More than 50 percent cotton.....	851	187,264	804	42,488	1,024	52,885	802	50,153	851	41,738
2211C 11	Weighing 10.7 ounces or less per square yard....	95	20,484	65	4,833	108	4,377	150	5,583	95	5,691
2211C 13	Weighing more than 10.7 ounces per square yard.	756	166,780	739	37,655	916	48,508	652	44,570	756	36,047
2221E 13	Chiefly spun polyester mixed with cotton.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Spun filament combinations.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211C 15	Chiefly cotton.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221C 18	Chiefly manmade.....	-	-	-	-	-	-	-	-	-	-
2211C 21	Canton flannels.....	413	25,914	425	6,360	425	9,551	388	5,004	413	4,999
	All other twill weaves.....	5,953	1,004,156	6,800	246,543	6,988	259,672	6,178	248,870	5,953	249,071
	More than 50 percent cotton.....	2,529	462,708	2,687	114,895	2,890	115,521	2,561	115,444	2,529	116,848
2211C 31	Weighing 5.9 ounces or less per square yards....	975	116,783	983	31,571	1,072	32,137	921	27,942	975	25,133
2211C 33	Weighing more than 5.9 ounces per square yard.	1,554	345,925	1,704	83,324	1,818	83,384	1,640	87,502	1,554	91,715
2221E 21	85 percent or more spun polyester.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 27. **PRODUCTION AND LOOM ASSIGNMENT OF 85 PERCENT OR MORE SPUN YARN FABRICS AND SPUN/FILAMENT COMBINATIONS, CHIEFLY COTTON OR MANMADE FIBERS, EXCLUDING BLENDS OF WOOL, SILK, AND CHIEFLY COTTON/OTHER VEGETABLE FIBERS AND PILE FABRICS: 1992—Continued**

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
2221E 23	All other twill weaves—Cont. Chiefly spun polyester mixed with cotton	2,076	317,182	2,150	78,123	2,082	78,272	2,082	76,807	2,076	83,980
2221E 25	Weighing 5.0 ounces or less per square yard.	543	52,767	677	16,836	576	12,248	570	11,854	543	11,829
2221E 26	Weighing more than 5.0 ounces per square yard.	1,533	264,415	1,473	61,287	1,506	66,024	1,512	64,953	1,533	72,151
2221E 27	Chiefly spun rayon and/or acetate	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211C 35	All other fabrics, 85 percent or more spun yarn	402	74,524	672	20,567	694	22,868	594	17,565	402	13,524
2221C 39	Spun/filament combinations	539	81,888	546	18,171	565	21,352	547	21,262	539	21,103
2211D 05	Chiefly cotton.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221D 07	Chiefly manmade	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221F 05	Sateens.	657	96,291	762	22,590	749	23,826	683	26,696	657	23,179
2221F 06	More than 50 percent cotton	198	42,812	179	9,100	176	10,639	225	11,458	198	11,615
2221F 07	Chiefly spun polyester mixed with cotton	131	17,858	195	5,447	153	4,296	159	4,161	131	3,954
2211D 07	Chiefly spun rayon and/or acetate	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221G 05	All other fabrics, 85 percent or more spun yarn	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211D 11	Spun/filament combinations	217	27,431	253	6,302	280	6,762	170	8,716	217	5,651
2221G 05	Chiefly cotton.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211D 13	Chiefly manmade	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221G 68	Oxfords.	1,432	232,645	1,101	51,416	1,639	57,008	1,421	62,466	1,432	61,755
2211D 31	More than 50 percent cotton	766	134,685	587	27,630	960	34,769	815	35,858	766	36,428
2211D 35	Chiefly spun polyester mixed with cotton	203	23,951	118	6,708	308	5,940	204	6,271	203	5,032
2221G 82	All other fabrics, 85 percent or more spun yarn	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211D 45	Spun/filament combinations	212	24,740	169	6,104	157	5,907	148	6,244	212	6,485
2221F 32	Chiefly cotton.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221F 37	Chiefly manmade	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211D 51	Birdseye diaper cloth.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221F 41	Huck and crash toweling.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211D 55	Table damask	394	66,218	343	14,637	359	16,207	355	15,591	394	19,783
2221F 41	More than 50 percent cotton	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211D 59	Chiefly spun polyester mixed with cotton	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221F 41	All other fabrics, 85 percent or more spun yarn	-	-	-	-	-	-	-	-	-	-
2211D 63	Spun/filament combinations	-	-	-	-	-	-	-	-	-	-
2221F 41	Chiefly cotton.	-	-	-	-	-	-	-	-	-	-
2211D 67	Chiefly manmade	-	-	-	-	-	-	-	-	-	-
2221F 41	Jacquard and dobby shirting fabrics	635	51,407	408	11,811	433	10,930	752	12,085	635	16,581
2211D 71	More than 50 percent cotton	111	20,665	68	4,364	82	4,671	137	5,284	111	6,346
2221F 41	Chiefly spun polyester mixed with cotton	107	8,745	122	3,204	199	1,734	114	1,733	107	2,074

See footnotes at end of table.

Table 27. **PRODUCTION AND LOOM ASSIGNMENT OF 85 PERCENT OR MORE SPUN YARN FABRICS AND SPUN/FILAMENT COMBINATIONS, CHIEFLY COTTON OR MANMADE FIBERS, EXCLUDING BLENDS OF WOOL, SILK, AND CHIEFLY COTTON/OTHER VEGETABLE FIBERS AND PILE FABRICS:**
1992—Continued

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
2221F 43	Jacquard and dobby shirting fabrics—Cont.										
	All other fabric, 85 percent or more spun yarn	335	17,655	131	2,825	73	3,257	441	4,703	335	6,870
	Spun/filament combinations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211D 53	Chiefly cotton	(D)	(D)	(D)	(D)	(D)	(D)	-	-	(D)	(D)
2221G 84	Chiefly manmade	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	All other weaves	5,338	615,051	5,518	150,723	6,016	158,768	5,605	153,722	5,338	151,838
	More than 50 percent cotton	1,315	153,590	1,544	39,173	1,608	39,821	1,369	36,669	1,315	37,927
2211D 62	Weighing 5.9 ounces or less per square yard ...	354	56,239	361	13,440	360	13,873	316	12,323	354	16,603
2211D 64	Weighing more than 5.9 ounces per square yard.	961	97,351	1,183	25,733	1,248	25,948	1,053	24,346	961	21,324
2221F 52	85 percent or more spun polyester	322	24,378	'279	5,802	'311	'5,897	'331	'6,020	322	6,659
	Chiefly spun polyester mixed with cotton	608	47,710	618	10,122	644	12,188	592	12,039	608	13,361
2221F 54	Weighing 5.0 ounces or less per square yard. ...	190	22,630	173	4,757	179	6,126	180	5,812	190	5,935
2221F 56	Weighing more than 5.0 ounces per square yard.	418	25,080	445	'5,365	465	6,062	412	6,227	418	7,426
2221F 58	All other fabrics, 85 percent or more spun yarn	1,171	99,412	903	21,788	949	23,816	1,096	25,206	1,171	28,602
	Spun/filament combinations	1,922	289,961	'2,174	'73,838	2,504	77,046	2,217	73,788	1,922	65,289
2211D 66	Chiefly cotton	71	10,004	'80	'2,717	83	3,174	63	1,937	71	2,176
2221G 87	Chiefly manmade	1,851	279,957	'2,094	'71,121	2,421	73,872	2,154	71,851	1,851	63,113

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously published figures.

Table 28. **PRODUCTION AND LOOM ASSIGNMENT OF 85 PERCENT OR MORE FILAMENT YARN FABRICS: 1992**

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
	85 percent or more filament yarn fabrics	21,057	5,729,093	22,788	1,363,785	22,589	1,424,104	22,211	1,436,801	21,057	1,504,403
2221B 02	High tenacity yarn fabrics. . .	690	114,222	'964	29,529	953	32,656	949	29,503	690	22,534
2221C 02	100 percent and chiefly rayon.	356	18,745	498	4,767	500	4,641	522	4,827	356	4,510
2221C 04	100 percent and chiefly nylon.	184	47,307	'238	'12,167	222	12,539	215	12,013	184	10,588
2221C 07	100 percent and chiefly polyester	150	48,170	'228	12,595	231	15,476	212	12,663	150	7,436
	85 percent more filament yarn fabric obtained from strip or the like (except rayon and/or acetate).	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	85 percent or more acetate or triacetate filament yarn fabrics.	4,003	576,826	4,889	149,913	4,736	156,388	4,580	145,647	4,003	124,878
	Weighing not more than 5 ounces per square yard ..	3,592	526,325	4,451	136,538	4,303	142,847	4,153	132,913	3,592	114,027
2221B 11	Plain weave.	2,508	354,276	3,072	93,173	2,958	98,057	2,738	85,856	2,508	77,190
2221B 13	Other weaves.	1,084	172,049	1,379	43,365	1,345	44,790	1,415	47,057	1,084	36,837
	Weighing more than 5 ounces per square yard ..	411	50,501	'438	13,375	433	13,541	427	12,734	411	10,851
2221B 15	Plain weave.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221B 17	Other weaves.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chiefly rayon and/or acetate filament yarn fabrics.	1,342	181,675	'1,517	'45,136	1,497	44,057	1,381	45,500	1,342	46,982
2221B 32	Weighing not more than 5 ounces per square yard ..	896	134,132	'1,027	'35,040	978	33,007	815	30,636	896	35,449
2221B 35	Weighing more than 5 ounces per square yard ..	446	47,543	'490	'10,096	519	11,050	566	14,864	446	11,533
	85 percent or more nylon filament yarn fabrics	3,432	487,946	3,495	125,400	3,483	130,194	3,319	122,940	3,432	109,412
2221C 11	Typewriter and other impression fabrics	721	105,398	835	28,719	765	28,295	624	25,940	721	22,444
	Other 85 percent or more nylon filament yarn fabrics.	2,711	382,548	2,660	96,681	2,718	101,899	2,695	97,000	2,711	86,968
	Weighing not more than 5 ounces per square yard.	2,421	325,738	2,412	82,821	2,409	85,658	2,419	83,634	2,421	73,625
2221C 14	Flat, non-textured.	2,164	276,117	2,111	69,966	2,088	71,995	2,066	69,044	2,164	65,112
2221C 16	All other.	257	49,621	301	12,855	321	13,663	353	14,590	257	8,513
	Weighing more than 5 ounces per square yard ..	290	56,810	248	13,860	309	16,241	276	13,366	290	13,343
2221C 22	Flat, non-textured.	207	23,901	166	5,328	197	6,219	202	6,302	207	6,052
2221C 24	All other.	83	32,909	82	8,532	112	10,022	74	7,064	83	7,291
	Other chiefly nylon filament fabrics.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221C 32	Weighing not more than 5 ounces per square yard ..	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221C 34	Weighing more than 5 ounces per square yard ..	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 28. **PRODUCTION AND LOOM ASSIGNMENT OF 85 PERCENT OR MORE FILAMENT YARN FABRICS: 1992—Continued**

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
2221C 42	85 percent or more polyester filament yarn fabrics	5,643	725,730	5,786	170,926	5,697	186,673	5,851	189,436	5,643	178,695
	Textured	4,040	518,452	4,227	122,260	4,055	135,256	4,059	131,029	4,040	129,907
	Weighing not more than 5 ounces per square yard ¹	2,307	275,057	2,354	64,632	2,254	69,886	2,385	70,998	2,307	69,541
2221C 44	Flat	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221C 45	Other	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221C 50	Weighing more than 5 ounces per square yard ¹	1,733	243,395	1,873	57,628	1,801	65,370	1,674	60,031	1,733	60,366
	Non-textured	1,603	207,278	1,559	48,666	1,642	51,417	1,792	58,407	1,603	48,788
	Weighing not more than 5 ounces per square yard ¹	971	113,030	941	27,911	873	26,528	1,137	32,075	971	26,516
2221C 55	Other chiefly polyester filament fabrics	632	94,248	618	20,755	769	24,889	655	26,332	632	22,272
2221C 62	Glass fiber fabrics	218	13,097	241	3,168	252	3,609	220	3,725	218	2,595
2221C 72	Woven roving and screening	116	48,410	102	11,726	115	13,606	115	11,969	116	11,109
2221C 74	All other glass fiber fabrics	2,115	314,034	2,292	80,006	2,360	86,770	2,263	76,270	2,115	70,988
2221C 80	All other 85 percent or more filament yarn fabrics, including saran and olefin ..	3,246	3,253,136	3,230	745,337	3,224	766,517	3,267	808,223	3,246	933,059
	Carpet backing	2,712	3,003,920	2,698	681,779	2,689	704,960	2,731	743,314	2,712	873,867
	Woven synthetic, including olefin	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221C 83	Jute and other backing ..	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221C 84	All other	534	249,216	532	63,558	535	61,557	536	64,909	534	59,192

(D) Data withheld to avoid disclosing figures for individual companies.

¹Revised by 5 percent or more from previously published figures.¹Classified on a finished weight basis.

Table 29. PRODUCTION AND LOOM ASSIGNMENT OF PILE FABRICS INCLUDES YARN DYED FABRICS: 1992

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
	Pile fabrics.....	5,236	520,874	5,687	132,610	5,508	142,993	5,319	122,907	5,236	122,364
	Corduroy.....	694	46,819	830	15,244	614	16,755	462	7,183	694	7,637
	More than 50 percent cotton.....	694	46,819	830	15,244	614	16,755	462	7,183	694	7,637
2211E 01	Finewales and pinwales.....	419	24,905	486	7,121	428	10,855	274	3,523	419	3,406
2211E 03	Midwales.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2211E 06	Widewales and other ..	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 01	Chiefly manmade fiber ...	-	-	-	-	-	-	-	-	-	-
	Velvets, plushes, and other pile fabrics.....	670	52,914	751	12,975	750	14,891	717	13,093	670	11,955
2211E 21	More than 50 percent cotton.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 11	Chiefly manmade fiber ...	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Terry cloth and terry toweling.....	3,872	421,141	4,106	104,391	4,144	111,347	4,140	102,631	3,872	102,772
2211E 32	Terry toweling.....	3,761	407,950	3,947	101,006	3,976	108,339	3,980	98,984	3,761	99,621
2211E 34	Terry cloth.....	111	13,191	159	3,385	168	3,008	160	3,647	111	3,151

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

Table 30. PRODUCTION AND LOOM ASSIGNMENT OF WOOLEN AND WORSTED FABRICS, INCLUDING CHIEFLY MANMADE/WOOL BLENDS AND CHIEFLY COTTON/WOOL BLENDS: 1992

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
	Woolen and worsted fabrics, 36 percent or more wool (except felts) ¹	1,778	176,285	1,882	45,660	1,985	47,199	1,898	43,910	1,778	39,516
	Apparel fabrics, including										
	government orders	1,679	167,701	1,768	43,929	1,873	45,455	1,794	40,874	1,679	37,443
	Worsted fabrics	1,086	103,544	1,075	27,773	1,173	27,671	1,098	24,347	1,086	23,753
22312 01	Weighing not more than 5.9 ounces per square yard	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
22312 02	Weighing more than 5.9 ounces per square yard	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Woolen fabrics	593	64,157	693	16,156	700	17,784	696	16,527	593	13,690
22312 21	Weighing not more than 9 ounces per square yard	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
22312 23	Weighing more than 9 ounces per square yard	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Nonapparel fabrics, including										
	government orders (except felts)	99	8,584	'114	1,731	'112	1,744	104	3,036	99	2,073
22312 62	Blanketing, including thermal	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
22312 61	Upholstery fabric	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
22312 85	All other fabrics	54	2,755	'55	'707	55	686	53	661	54	701
22312 92	Woven felts (thousands of pounds)	115	4,068	'112	'1,148	110	1,093	117	975	115	852
	Chiefly manmade/wool blend and chiefly cotton/wool blend fabrics	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Chiefly spun polyester mixed mainly or solely with wool	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 21	Woolen	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Worsted	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 25	Weighing not more than 5.9 ounces per square yard	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 27	Weighing more than 5.9 ounces per square yard	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 32	All other chiefly spun fibers mixed mainly or solely with wool	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Chiefly filament polyester mixed mainly or solely with wool or spun polyester/wool blends (less than 36 percent wool)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 51	Woolen	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Worsted	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 53	Weighing not more than 5.9 ounces per square yard	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221H 55	Weighing more than 5.9 ounces per square yard	-	-	-	-	-	-	-	-	-	-
2221H 63	All other chiefly filament yarn mixed mainly or solely with wool	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously published figures.

¹Includes fabrics 36 percent or more wool or reprocessed wool by weight. 1986 and prior years include fabrics 50 percent or more wool or reprocessed wool by weight.

Table 31. PRODUCTION AND LOOM ASSIGNMENT OF UPHOLSTERY FABRICS: 1992

[Looms operating in number; production in thousands of square yards]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Looms operating end of year	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production	Looms operating	Production
	Upholstery fabrics	3,793	380,680	3,669	92,863	3,960	103,162	3,828	95,619	3,793	89,036
	85 percent or more spun yarn and spun filament combinations	3,064	297,908	2,993	74,001	3,176	80,871	3,062	73,660	3,064	69,376
2211E 41	Pile woven	572	59,060	700	'15,203	692	'17,081	671	14,986	'572	11,790
	All cotton and chiefly cotton	20	672	'23	195	'20	160	'21	180	'20	'137
2221H 41	All manmade and chiefly manmade	552	58,388	677	'15,008	672	'16,921	650	14,806	552	11,653
2211X 01	Flat woven	2,492	238,848	2,293	58,798	2,484	63,790	2,391	58,674	2,492	57,586
	All cotton and chiefly cotton	772	71,312	747	19,425	792	20,150	745	16,612	772	15,125
	All manmade and chiefly manmade	1,720	167,536	1,546	39,373	1,692	43,640	1,646	42,062	1,720	42,461
2221X 01	Olefin	417	39,820	342	'8,422	340	'10,661	342	9,970	417	10,767
2221X 03	All other flat woven manmade fiber fabrics	1,303	127,716	1,204	30,951	1,352	32,979	1,304	32,092	1,303	31,694
	85 percent or more filament yarn	729	82,772	676	18,862	784	22,291	766	21,959	729	19,660
2221X 01	All polyester and chiefly polyester	276	30,344	290	6,577	341	8,429	341	8,336	276	7,002
2221X 03	All nylon and chiefly nylon	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2221X 05	All olefin and chiefly olefin	357	47,799	317	11,389	351	12,522	339	12,181	357	11,707
2221X 07	All other filament fiber fabrics	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

Note: These data are included in the data shown in tables 2-27 and 2-28.

(D) Data withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously published figures.

Table 32. PRODUCTION OF TIRE CORD AND TIRE CORD FABRICS: 1992

[Thousands of pounds]

Product code	Product description	Production				
		Total	First quarter	Second quarter	Third quarter	Fourth quarter
22960 00	Tire cord and tire cord fabrics	762,849	'190,258	192,680	190,275	189,636
22960 12	Cotton tire cord and tire cord fabrics	-	-	-	-	-
22960 32	Rayon tire cord and tire cord fabrics	1,858	648	434	462	314
22960 35	Nylon tire cord and tire cord fabrics	150,501	39,406	39,394	37,732	33,969
22960 37	Polyester tire cord and tire cord fabrics	206,441	52,460	50,973	48,953	54,055
22960 38	Glass tire cord and tire cord fabrics	1,083	230	330	308	215
22960 45	Steel tire cord	387,964	'93,703	97,731	99,011	97,519
22960 49	All other tire cord and tire cord fabrics, including chafer	15,002	3,811	3,818	3,809	3,564

- Represents zero.

'Revised by 5 percent or more from previously published figures.

Table 33. **LOOMS IN PLACE AND LOOM HOURS OPERATED IN BROADWOVEN FABRIC MILLS: 1992**

[Looms in place in number; loom hours in thousands]

Type of loom	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
	Looms in place Dec. 31, 1992	Looms hours operated	Looms in place	Looms hours operated	Looms in place	Looms hours operated	Looms in place	Looms hours operated	Looms in place	Loom hours operated
Total	94,286	684,252	97,544	176,748	97,858	175,393	95,539	170,102	94,286	162,009
Shuttle type looms	29,102	204,744	32,468	56,636	31,457	52,700	30,432	50,291	29,102	45,117
Single shuttle cam looms	20,458	143,171	22,479	39,021	21,778	36,926	21,136	34,835	20,458	32,389
Single shuttle dobby looms	4,812	39,569	6,031	11,729	5,592	10,466	5,386	9,418	4,812	7,956
Multiple shuttle box or head motion looms	2,448	13,841	2,438	3,622	2,603	3,270	2,436	3,885	2,448	3,064
Double shuttle pile and plush, and jacquard looms	1,384	8,163	1,520	2,264	1,484	2,038	1,474	2,153	1,384	1,708
Shuttleless looms and weaving machines	65,184	479,508	65,076	120,112	66,401	122,693	65,107	119,811	65,184	116,892
Single filling insertion capability	38,922	302,258	38,952	76,008	39,258	77,180	38,842	75,054	38,922	74,016
Air jet looms	15,660	123,772	15,494	31,222	15,630	31,232	15,582	30,945	15,660	30,373
Water jet looms	6,039	44,811	5,974	11,378	6,028	11,664	6,009	11,397	6,039	10,372
Projectile looms	12,361	97,689	12,301	24,097	12,653	24,840	12,443	24,116	12,361	24,636
Rapier looms	4,862	35,986	5,183	9,311	4,947	9,444	4,808	8,596	4,862	8,635
Multiple filling insertion capability	25,532	172,863	25,318	43,065	26,333	44,356	25,539	43,596	25,532	41,846
Air jet looms	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Water jet looms	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Projectile looms	10,260	74,442	10,473	18,946	10,716	19,393	10,436	18,120	10,260	17,983
Rapier looms	11,922	73,456	11,834	18,221	12,056	18,465	11,829	18,913	11,922	17,857
Pile and plush looms	730	4,387	806	1,039	810	1,157	726	1,161	730	1,030

(D) Data withheld to avoid disclosing figures for individual companies.

*Revised by 5 percent or more from previously published figures.

Table 34. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF BROADWOVEN FABRICS: 1992

[Quantity in thousands of square yards; value in thousands of dollars]

Product description	Manufacturers' shipments ¹ (quantity)	Imports for consumption ²		Percent imports to manufacturers' shipments (quantity)	Exports of domestic merchandise ⁴		Percent exports to manufacturers' shipments (quantity)	Apparent consumption ⁵
		Quantity	Value ³		Quantity	Value		
Cotton fabrics ⁶	3,845,875	1,594,472	1,623,436	41.5	197,411	417,998	5.1	5,242,936
Cheesecloth and batistes	(D)	38,963	26,366	(D)	27,480	48,030	(D)	(D)
Print cloth	359,998	333,544	214,217	92.7	4,385	8,413	1.2	689,157
Poplin and broadcloth	43,993	258,142	209,382	586.8	20,991	41,013	47.7	281,144
Weighing 5.9 ounces or less per square yard	33,139	253,893	200,438	766.2	9,773	24,245	29.5	277,259
Weighing more than 5.9 ounces per square yard	10,855	4,249	8,944	39.1	11,218	16,768	103.4	3,885
Duck, including tape warp	(D)	87,584	76,228	(D)	12,757	28,609	(D)	(D)
Sheeting	577,214	385,458	284,361	66.8	15,405	33,081	2.7	947,267
Twills and sateens	464,424	238,908	306,283	51.4	21,169	41,256	4.6	682,162
Oxfords	52,241	9,206	23,122	17.6	(NA)	(NA)	(NA)	(NA)
All other constructions	173,947	61,673	117,123	35.5	(NA)	(NA)	(NA)	(NA)
Blue Denim	647,498	86,931	157,547	13.4	61,583	151,959	9.5	672,846
Yarn dyed fabric	301,970	85,017	175,702	28.2	29,018	51,015	9.6	357,969
Pile fabrics (except terry), including yarn dyed	41,073	7,896	31,416	19.2	2,484	8,223	6.0	46,484
Terry, including yarn dyed	352,125	1,152	1,689	0.3	2,138	6,399	0.6	351,138
Manmade fiber fabrics	9,479,023	792,140	1,181,844	8.4	300,357	684,732	3.2	9,970,807
85 percent or more filament yarn fabrics ..	4,790,212	359,260	567,360	7.5	171,359	402,211	3.6	4,978,112
Nylon and polyester high tenacity fabric ..	79,830	10,140	29,862	12.7	31,998	67,903	40.1	57,972
Rayon high tenacity fabric	15,673	539	1,368	3.4	5,262	12,947	33.6	10,950
Typewriter fabric	88,125	94	252	0.1	(NA)	(NA)	(NA)	(NA)
Rayon or acetate filament yarn fabrics ..	634,198	20,910	55,668	3.3	11,169	25,390	1.8	643,940
Polyester filament yarn fabric	617,748	196,470	365,497	31.8	55,384	91,606	9.0	758,835
Glass fiber fabric	303,047	38,934	48,182	12.8	14,781	50,481	4.9	327,199
Nylon filament yarn fabric	329,523	29,608	37,736	9.0	(NA)	(NA)	(NA)	(NA)
85 percent or more filament yarn obtained from strip	(D)	57,304	14,941	(D)	12,090	35,306	(D)	(D)
All other filament yarn fabric	(D)	5,261	13,854	(D)	40,675	118,578	(D)	(D)
85 percent or more spun yarn fabric	3,540,015	289,895	312,325	8.2	105,605	237,302	3.0	3,724,305
Cheesecloth and batistes	158,459	18,215	13,711	11.5	(?)	(?)	(?)	(?)
Poplin and broadcloth	479,564	78,505	67,329	16.4	(?)	(?)	(?)	(?)
Poly/cotton blends weighing less than 5.0 ounces per square yard	374,806	72,916	55,621	19.5	(?)	(?)	(?)	(?)
Poly/cotton blends weighing more than 5.0 ounces per square yard ..	36,368	1,294	2,156	3.6	(?)	(?)	(?)	(?)
All other spun yarns	68,390	4,295	9,552	6.3	(?)	(?)	(?)	(?)
Print cloth	596,983	67,916	38,287	11.4	(?)	(?)	(?)	(?)
Duck	18,694	734	2,459	3.9	(?)	(?)	(?)	(?)
Sheeting	1,487,952	27,475	25,251	1.8	(?)	(?)	(?)	(?)
Poly/cotton blends weighing 5.0 ounces or less per square yard	1,304,435	20,721	12,872	1.6	(?)	(?)	(?)	(?)
Poly/cotton blends weighing more than 5.0 ounces per square yard ..	36,176	1,441	1,503	4.0	(?)	(?)	(?)	(?)
All other spun yarn	147,340	5,313	10,876	3.6	(?)	(?)	(?)	(?)
Sateens or twills	405,145	69,819	72,915	17.2	(?)	(?)	(?)	(?)
Oxford	37,422	262	435	0.7	(?)	(?)	(?)	(?)
All other spun manmade fiber fabrics ..	140,059	11,159	41,150	8.0	(?)	(?)	(?)	(?)
Yarn dyed fabric	173,421	8,608	12,791	5.0	(?)	(?)	(?)	(?)
Pile fabrics	42,316	7,202	37,997	17.0	(?)	(?)	(?)	(?)
Spun/filament yarn combinations, including yarn dyed	1,088,263	119,572	222,159	11.0	23,393	45,219	2.1	1,184,443
Poplin and broadcloth	256,803	75,218	113,002	29.3	(NA)	(NA)	(NA)	(NA)
Sheeting	(D)	1,892	4,811	(D)	(NA)	(NA)	(NA)	(NA)
Print cloth	(D)	12,137	10,550	(D)	(NA)	(NA)	(NA)	(NA)
Twills and sateens	(D)	5,126	15,409	(D)	(NA)	(NA)	(NA)	(NA)
All other	296,689	25,200	78,387	8.5	(NA)	(NA)	(NA)	(NA)
Chiefly manmade/wool blends	60,533	23,413	80,000	38.7	(NA)	(NA)	(NA)	(NA)
Silk fabrics	810	26,495	301,810	3,270.1	2,523	19,369	311.4	24,782
Wool fabrics	147,395	27,230	277,165	18.5	5,775	33,376	3.9	168,850

Note: Fabric blends as shown in Current Industrial Report series MQ22T are reported based on the chief weight of the fiber; whereas, fabric blends as shown for imports and exports are based on the chief value of the fiber.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available.

¹Represents production of gray broadwoven fabrics; import and export data represent gray as well as finished broadwoven fabrics. For a comparison of Standard Industrial Classification (SIC) based product codes with Schedule B export numbers and HTSUSA import numbers, see appendix B. ²Source: Bureau of the Census Report IM 145, U.S. Imports for Consumption. ³This dollar value represents the c.i.f. (cost, insurance, and freight) at the first port of entry in the United States plus calculated import duty. ⁴Source: Bureau of the Census Report EM 545, U.S. Exports. ⁵Apparent consumption represents new domestic supply and is derived by subtracting exports from the total manufacturers' shipments plus imports. ⁶Includes all cotton and chiefly cotton mixed with manmade fiber. ⁷Due to the manner by which export data are collected, only the total for "Manmade 85 percent or more spun yarn fabrics" is available. Product export data are not available.

HISTORICAL NOTE

Data on the production of broadwoven fabrics have been collected by the Bureau of the Census since 1943. Historical data may be obtained from Current Industrial Reports (called Facts for Industry prior to 1959) at your Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100. Additional information (employment, payroll, cost of

materials, capital expenditures, inventories, etc.) on broadwoven fabrics is available in both the census of manufactures and the annual survey of manufactures.

CONTACT FOR DATA USERS

For additional information about these data, contact Keith Featherstone, 301-763-2553.

2.5 KNIT FABRIC

INTRODUCTION

The data from the MA22K, Knit Fabric survey include all firms producing knit fabric, whether for sale, for own use, or on commission. It excludes very small firms (generally those with less than five employees) for which data for the census of manufactures were derived from administrative records.

The data for production includes all knit fabric off the knitting machine whether as yard goods, circular sweater strips, or full fashioned garment sections. It also includes the production of fabrics that are finished within the same plant and shipped as finished garments. It does not include hosiery.

EXPLANATION OF TERMS

For Own Use. Includes cloth which is cut, cut and sewn, or further fabricated within the plant knitting the cloth.

For Sale. Includes knit cloth which is sold to other plants of the same company for finishing, and to other firms or plants not affiliated with the same company.

On Commission. Includes fabric made from yarn owned by others.

See additional explanation of terms at the beginning of this chapter.

Table 35. **SUMMARY OF KNIT FABRIC PRODUCTION: 1982 TO 1992**

[Millions of pounds]

Year	Total	Warp knit	Weft knit
1992	2,081	296	1,785
1991	1,963	296	1,667
1990	1,901	269	1,632
1989	1,935	315	1,620
1988	1,662	321	1,341
1987	1,737	328	1,409
1986	1,757	360	1,397
1985	1,496	345	1,151
1984 ¹	1,514	360	1,154
1983	1,460	330	1,130
1982	1,309	289	1,019

Note: Detail may not add due to independent rounding.

¹Data for 1984 were collected from a new reporting panel based on the 1982 Census of Manufactures. This panel contained a large number of establishments not previously included in the survey. Although the data for these establishments are included in the 1984 data, no previous period data were requested. Therefore, data for 1983 and prior years are not comparable.

Table 36. PRODUCTION OF KNIT FABRICS OFF KNITTING MACHINE, BY TYPE: 1992 AND 1991

[Thousands of pounds]

Product code	Product description	1992		1991	
		Number of knitting machines ¹	Total production	Number of knitting machines ¹	Total production
	Knit fabric production, excluding narrow knit fabric and knit garment lengths, trimmings, and collars.	21,905	2,080,534	22,720	1,963,116
	Warp knit fabric yard goods (over 12 inches in width) ..	4,658	295,573	5,004	296,000
22581 01	Pile fabrics (raschel and raschel crochet)	1,373	68,292	1,379	69,241
22581 02	Long pile fabrics	(X)	23,437	(X)	21,705
22581 03	All acrylic or modacrylic and chiefly acrylic or modacrylic	(X)	3,076	(X)	2,541
22581 04	All polyester and chiefly polyester	(X)	20,110	(X)	18,714
22581 05	All other fibers	(X)	(D)	(X)	450
	Fiber n.s.k.	(X)	(D)	(X)	-
22581 07	Looped pile fabrics (terry cloth)	(X)	17,851	(X)	17,645
22581 08	All cotton and chiefly cotton	(X)	5,101	(X)	3,883
22581 09	All manmade and chiefly manmade	(X)	12,748	(X)	13,760
22581 13	All other fibers	(X)	(D)	(X)	(D)
	Fiber n.s.k.	(X)	(D)	(X)	(D)
22581 15	All other pile fabrics (velour, etc.)	(X)	25,792	(X)	28,888
22581 16	All cotton and chiefly cotton	(X)	(D)	(X)	(D)
22581 17	All manmade and chiefly manmade	(X)	24,245	(X)	26,661
22581 19	All other fibers	(X)	(D)	(X)	(D)
	Fiber n.s.k.	(X)	-	(X)	-
	Fabric n.s.k.	(X)	1,212	(X)	1,003
22581 51	Elastic fabrics (containing by weight 5 percent or more elastomeric yarn or rubber thread)	1,419	33,019	732	28,081
22581 61	All other warp knit fabrics	1,866	194,262	2,893	198,678
	By type:				
22581 62	Tricot, simplex and milanese	(X)	154,264	(X)	148,963
22581 63	All other	(X)	37,918	(X)	44,213
	Type n.s.k.	(X)	2,080	(X)	5,502
	By fiber:				
22581 71	All cotton and chiefly cotton	(X)	19,126	(X)	22,346
22581 72	All wool and chiefly wool	(X)	(D)	(X)	(D)
22581 73	All manmade and chiefly manmade	(X)	174,816	(X)	175,740
22581 75	All other fibers	(X)	(D)	(X)	(D)
	Fiber n.s.k.	(X)	305	(X)	446
	Wet knit yard goods (over 12 inches in width)	17,247	1,784,961	17,716	1,667,116
22571 01	Pile fabrics	1,079	60,283	1,128	61,896
22571 03	Long pile fabrics, including sliver knit	(X)	29,913	(X)	30,867
22571 04	All polyester and chiefly polyester	(X)	12,199	(X)	(D)
22571 05	All acrylic or modacrylic and chiefly acrylic or modacrylic	(X)	16,755	(X)	23,596
22571 06	All other fibers	(X)	(D)	(X)	(D)
	Fiber n.s.k.	(X)	(D)	(X)	(D)
22571 10	Looped pile fabrics (terry cloth)	(X)	22,121	(X)	20,882
22571 14	All cotton and chiefly cotton	(X)	11,422	(X)	14,892
22571 16	All manmade and chiefly manmade	(X)	8,785	(X)	2,952
22571 19	All other fibers	(X)	(D)	(X)	3,038
	Fiber n.s.k.	(X)	(D)	(X)	-
22571 21	All other pile fabrics (velour, etc.)	(X)	7,715	(X)	9,360
22571 23	All cotton and chiefly cotton	(X)	4,359	(X)	3,187
22571 24	All manmade and chiefly manmade	(X)	3,352	(X)	5,298
22571 28	All other fibers	(X)	(D)	(X)	(D)
	Fiber n.s.k.	(X)	(D)	(X)	(D)
	Fabric n.s.k.	(X)	534	(X)	787
22571 71	Elastic fabrics (containing by weight 5 percent or more elastomeric yarn or rubber thread)	177	16,334	91	8,250
22571 31	Single circular knit (except pile and elastic)	10,664	1,345,929	10,895	1,208,019
	By type:				
22571 32	Fleece or flannel	(X)	405,281	(X)	349,856
22571 33	Underwear and nightwear	(X)	459,303	(X)	399,853
22571 34	All other apparel uses	(X)	379,167	(X)	346,190
22571 36	All other uses	(X)	88,190	(X)	95,641
	Type n.s.k.	(X)	13,988	(X)	16,479

See footnotes at end of table.

Table 36. PRODUCTION OF KNIT FABRICS OFF KNITTING MACHINE, BY TYPE: 1992 AND 1991—Continued

[Thousands of pounds]

Product code	Product description	1992		1991	
		Number of knitting machines ¹	Total production	Number of knitting machines ¹	Total production
	Knit fabric production—Cont.				
	Weft knit goods (over 12 inches in width)—Cont.				
22571 31	Single circular knit (except pile and elastic)—Cont.				
	By fiber:				
22571 37	All cotton and chiefly cotton.....	(X)	722,362	(X)	585,867
22571 38	All wool and chiefly wool	(X)	2,287	(X)	2,902
22571 55	All nylon and chiefly nylon	(X)	4,716	(X)	6,511
22571 56	All polyester and chiefly polyester	(X)	270,671	(X)	277,147
22571 39	All other manmade and chiefly manmade.....	(X)	336,277	(X)	315,477
22571 40	All other fibers.....	(X)	8,452	(X)	16,579
	Fiber n.s.k.....	(X)	1,164	(X)	3,536
22571 41	Double knit and interlock	2,807	245,421	3,138	289,432
	By fiber:				
22571 51	All cotton and chiefly cotton.....	(X)	92,372	(X)	99,426
22571 52	All wool and chiefly wool	(X)	2,127	(X)	1,580
22571 53	All manmade and chiefly manmade	(X)	144,871	(X)	180,097
22571 54	All other fibers.....	(X)	5,074	(X)	8,071
	Fiber n.s.k.....	(X)	977	(X)	258
	By type:				
22571 45	Outerwear apparel, other than shirts	(X)	79,105	(X)	104,673
22571 44	Outer shirts, blouses, and tops	(X)	118,209	(X)	129,585
22571 47	All other uses	(X)	38,057	(X)	47,063
	Type n.s.k.....	(X)	10,050	(X)	8,111
22571 60	Rib other than double knit and interlock	2,520	116,994	2,464	99,519
22571 61	All cotton and chiefly cotton.....	(X)	68,395	(X)	53,512
22571 62	All wool and chiefly wool	(X)	1,800	(X)	1,491
22571 63	All manmade and chiefly manmade	(X)	45,724	(X)	42,187
22571 65	All other fibers.....	(X)	880	(X)	1,918
	Fiber n.s.k.....	(X)	195	(X)	411
	Narrow knit fabric production.....	921	25,491	1,000	22,144
22581 91	Narrow warp knit yard goods (12 inches and narrower in width)	565	15,933	616	15,843
22581 93	Elastic fabrics	454	13,972	502	14,556
22581 95	All other narrow knit fabric	111	1,961	114	1,287
22571 81	Narrow weft knit yard goods (12 inches or less)	356	9,558	384	6,301
22571 83	Elastic fabrics	(D)	(D)	102	5,038
22571 84	All other narrow knit fabric	(D)	(D)	282	1,263
	Knit garment lengths, trimmings, and collars ²	3,391	19,185	3,871	19,310
	Knit garment lengths, made on sweater, strip, v-bed strip, and full-fashioned machines.....	2,084	6,764	2,478	10,395
	Knit trimmings and collars.....	1,307	12,421	1,393	8,915

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. n.s.k. Not specified by kind. 'Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹Knitting machines operating on last workday of the year.

²Quantity produced in thousand dozens.

Table 37. PRODUCTION OF KNIT FABRICS OFF KNITTING MACHINE, BY METHOD OF DISTRIBUTION: 1992 AND 1991

[Thousands of pounds]

Product code	Product description	1992				1991			
		Produced for own use	Produced for sale	Produced on commission	Not specified by kind	Produced for own use	Produced for sale	Produced on commission	Not specified by kind
	Knit fabric production, excluding narrow knit fabric and knit garment lengths, trimmings, and collars . . .	1,085,311	765,904	227,207	2,112	969,339	729,540	256 007	'8,230
22581 01	Warp knit fabric yard goods (over 12 inches in width)	(D)	199,201	(D)	962	(D)	186,894	(D)	2,035
22581 51	Pile fabrics (raschel and raschel crochet)	14,088	41,248	11,994	962	22,786	36,081	8,339	2,035
22581 61	Elastic fabrics (containing by weight 5 percent or more elastomeric yarn or rubber thread)	(D)	20,443	(D)	-	(D)	22,764	(D)	-
	All other warp knit fabrics	47,466	137,510	9,286	-	57,458	128,049	'13,171	-
22571 01	Weft knit fabric yard goods (over 12 inches in width)	(D)	566,703	(D)	1,150	(D)	542,646	(D)	'6,195
22571 71	Pile fabrics	17,763	34,422	7,700	398	13,745	40,693	4,254	3,204
22571 31	Elastic fabrics (containing by weight 5 percent or more elastomeric yarn or rubber thread)	(D)	12,960	(D)	10	(D)	2,970	(D)	-
22571 41	Single circular knit (except pile and elastic)	871,065	369,393	104,972	499	764,336	314,942	'126,102	'2,639
22571 60	Double knit and interlock	61,203	109,621	74,569	28	57,243	146,859	85,175	'155
	Rib other than double knit and interlock	60,256	40,307	16,216	215	48,879	'37,182	13,261	'197
22581 91	Narrow knit fabric production	1,029	23,857	201	404	2,041	19,428	219	456
22581 93	Narrow warp knit yard goods (12 inches and narrower in width) . . .	178	(D)	(D)	404	839	(D)	(D)	456
22581 95	Elastic fabrics	(D)	13,844	(D)	-	(D)	13,853	(D)	-
22571 81	All other narrow knit fabric	(D)	(D)	-	404	(D)	(D)	-	456
22571 83	Narrow weft knit fabric yard goods (12 inches or less)	851	(D)	(D)	-	1,202	(D)	(D)	-
22571 84	Elastic fabrics	(D)	(D)	(D)	-	(D)	(D)	(D)	-
	All other narrow knit fabric	(D)	(D)	-	-	(D)	(D)	-	-
	Knit garment lengths, trimmings, and collars ¹	6,201	7,082	5,902	-	7,113	3,978	8,219	'.
	Knit garment lengths, made on sweater, strip, v-bed strip, and full-fashioned machines	2,296	688	3,780	-	2,432	1,789	6,174	'.
	Knit trimmings and collars	3,905	6,394	2,122	-	4,681	2,189	2,045	-

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

¹Revised by 5 percent or more from previously published figures.

¹Quantity produced in thousand dozens.

Table 38. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF KNIT FABRIC: 1992**

[Quantity in thousands of kilograms; value in thousands of dollars]

Product description	Domestic production		Exports of domestic merchandise ¹		Percent exports to manufacturers' shipments		Imports for consumption ²		Percent imports to domestic merchandise	
	Quantity	Value	Quantity	Value at port	Quantity	Value	Quantity	Value ³	Quantity	Value
Total.....	953,303	(NA)	46,369	317,314	4.9	(NA)	41,089	257,122	4.3	(NA)
Pile fabrics.....	58,322	(NA)	21,382	107,377	36.7	(NA)	19,782	32,846	33.9	(NA)
Long pile fabrics.....	24,200	(NA)	221	1,908	0.9	(NA)	597	1,568	-	(NA)
Looped pile fabrics.....	18,131	(NA)	13,316	59,660	73.4	(NA)	15,760	22,794	86.9	(NA)
Of cotton fibers.....	(D)	(NA)	147	690	(D)	(NA)	4,288	6,901	(D)	(NA)
Of manmade fibers.....	9,767	(NA)	13,046	58,501	133.6	(NA)	11,469	15,794	117.4	(NA)
Of other fibers.....	(D)	(NA)	123	469	(D)	(NA)	2	99	(D)	(NA)
Other pile fabrics.....	15,199	(NA)	7,844	45,809	51.6	(NA)	3,426	8,484	22.5	(NA)
Of cotton fibers.....	(D)	(NA)	1,363	5,120	(D)	(NA)	407	1,487	(D)	(NA)
Of manmade fibers.....	12,518	(NA)	1,780	16,328	14.2	(NA)	3,017	6,957	24.1	(NA)
Of other fibers.....	(D)	(NA)	4,701	24,361	(D)	(NA)	2	40	(D)	(NA)
Elastic fabrics.....	31,714	(NA)	3,722	36,753	11.7	(NA)	5,873	87,795	18.5	(NA)
12 inches or less in width.....	9,328	(NA)	2,649	19,434	28.4	(NA)	105	1,864	1.1	(NA)
Over 12 inches in width.....	22,387	(NA)	1,073	17,319	4.8	(NA)	5,768	85,931	25.8	(NA)
Other warp knit fabrics ⁴	103,095	(NA)	6,336	60,618	6.1	(NA)	2,619	28,539	2.5	(NA)
Of cotton fibers.....	8,676	(NA)	2,694	26,587	31.1	(NA)	488	4,769	5.6	(NA)
Of wool fibers.....	(D)	(NA)	3	38	(D)	(NA)	39	1,446	(D)	(NA)
Of manmade fibers.....	79,297	(NA)	3,490	32,717	4.4	(NA)	2,090	22,251	2.6	(NA)
Of other fibers.....	(D)	(NA)	149	1,276	(D)	(NA)	2	73	(D)	(NA)
Other narrow knit fabrics.....	2,235	(NA)	376	5,202	16.8	(NA)	472	4,788	21.1	(NA)
Other knit fabrics ⁵	782,314	(NA)	14,553	107,364	1.9	(NA)	12,343	103,154	1.6	(NA)
Of cotton fibers.....	400,587	(NA)	6,861	43,703	1.7	(NA)	8,940	58,099	2.2	(NA)
Of wool fibers.....	2,819	(NA)	22	534	0.8	(NA)	22	968	0.8	(NA)
Of manmade fibers.....	363,905	(NA)	6,567	54,330	1.8	(NA)	3,378	43,864	0.9	(NA)
Double knit or interlock.....	65,713	(NA)	(NA)	(NA)	(NA)	(NA)	1,727	23,766	2.6	(NA)
Other.....	298,191	(NA)	(NA)	(NA)	(NA)	(NA)	1,651	20,098	0.6	(NA)
Of other fibers.....	6,535	(NA)	1,103	8,797	16.9	(NA)	3	223	-	(NA)

Note: For comparison of SIC codes (domestic output), Schedule B export numbers, and HTSUSA import numbers, see appendix B.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.³This dollar value represents the c.i.f. (cost, insurance, and freight) value at first port of entry in the United States plus import duties.⁴Total includes SIC 22581 51 to avoid disclosing figures for individual companies.⁵Total includes SIC 22571 71 to avoid disclosing figures for individual companies.**HISTORICAL NOTE**

Data on the production of knit fabrics have been collected by the Bureau of the Census since 1966. Historical data may be obtained from the Current Industrial Reports available at your Federal Depository Library. Additional information (employment, payroll, cost of materials, capital expenditures, inventories, etc.) on knit fabrics is available

in both the census of manufactures and the annual survey of manufactures. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Keith J. Featherstone, 301-763-2553.

2.6 APPAREL

INTRODUCTION

The statistics in this subsection represent total U.S. production of most major garments. Hosiery, headwear, neckwear, fur garments, leather garments, and accessories are not included in this survey. Data on the quantity and value of shipments of gloves and mittens are collected separately and shown in separate tables at the end of the apparel subsection.

The apparel industry is characterized by three types of operations — manufacturers, jobbers, and contractors. The functions of the establishments classified as manufacturers include purchasing materials, cutting and sewing the product within the manufacturers' establishment, and selling the finished product. The functions of the jobber, like those of the manufacturer, involve buying raw materials and marketing the finished product. However, unlike the manufacturer, a jobber has a large part of the actual processing of the product done under contract in an outside factory. Finally, the function of a contractor is to make products in his establishment according to clearly defined specifications, from materials owned by others. A contractor, unlike the manufacturer or jobber, does not own the finished product and does not become involved in the actual sale of the finished goods.

The purpose of this survey is to provide the total domestic quantity produced and value of shipments for each type of garment. Since collecting this information from all three types of establishments would result in substantial duplication, only manufacturers and jobbers are surveyed.

One other form of manufacturing apparel that is becoming more and more significant is what is referred to as "807" production. For "807" production, a domestic manufacturer or jobber buys fabric and cuts a garment domestically, and then exports the cut pieces to be sewn. The completed garment is then imported. Under special tariff provisions, duty is paid only on the value added rather than the whole garment. The quantity and value of these garments are included in these domestic data as well as the import and export data.

EXPLANATION OF TERMS

See explanation of terms at the beginning of this chapter.

Table 39. SUMMARY OF QUANTITY OF PRODUCTION AND VALUE FOR APPAREL: 1992 AND 1991

[Quantities in thousands of dozens; value in millions of dollars]

Product description	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992										
Men's and boys':										
Suits	836	1,093.5	209	262.3	202	268.6	202	266.3	223	296.3
Coats	4,432	2,026.3	1,136	546.6	1,161	546.9	1,015	454.9	1,119	477.9
Tops	110,505	6,917.0	27,096	1,693.6	27,904	1,805.8	27,470	1,727.4	28,035	1,690.2
Bottoms	52,355	7,162.1	12,742	1,842.5	13,112	1,814.9	13,067	1,760.3	13,433	1,744.4
Underwear and nightwear	110,646	1,714.5	28,145	486.4	28,358	447.6	26,791	432.7	27,352	347.8
Other garments	6,313	869.9	1,557	221.6	1,589	241.0	1,428	194.6	1,739	212.7
Women's and girls':										
Dresses	13,158	4,226.2	2,870	931.2	2,979	1,032.5	3,509	1,072.8	3,800	1,189.7
Coats	3,872	1,836.3	947	476.1	1,122	560.2	928	429.4	875	370.6
Tops	41,156	4,028.1	9,549	972.3	10,501	1,057.0	10,313	987.6	10,793	1,011.2
Bottoms	43,390	5,778.4	9,702	1,447.2	11,175	1,525.4	11,348	1,403.6	11,166	1,402.2
Underwear and nightwear	99,361	3,652.9	24,087	905.4	26,948	1,018.3	24,844	873.8	23,482	855.4
Other garments	11,648	1,640.8	(D)	(D)	2,432	328.0	(D)	(D)	3,427	520.5
Infants' apparel	14,168	713.6	3,412	176.2	3,757	211.0	3,132	147.3	3,867	179.1
Coats and jackets	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Dresses	520	64.6	110	14.7	128	16.7	107	13.4	175	19.8
Knit shirts	1,464	73.3	397	17.2	347	21.0	303	15.3	417	19.8
Woven shirts	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Sweaters	57	4.3	28	2.6	12	0.9	(D)	(D)	(D)	(D)
Sets	984	64.2	258	16.4	260	16.9	209	13.4	257	17.5
Pants and shorts	1,112	56.7	272	12.4	392	20.4	234	12.5	214	11.4
Play clothing	2,798	199.4	600	44.5	771	60.0	676	40.5	751	54.4
Underwear	4,642	75.4	989	16.6	1,072	20.9	1,090	17.6	1,491	20.3
Nightwear	2,545	169.4	747	50.5	761	52.4	494	32.6	543	33.9
1991										
Men's and boys':										
Suits	792	1,106.5	199	278.3	188	269.7	191	261.5	214	297.0
Coats	(D)	(D)	(D)	(D)	1,054	468.1	932	396.0	1,097	479.2
Tops	93,666	5,936.6	25,044	1,553.2	23,695	1,559.1	23,181	1,491.0	21,746	1,333.3
Bottoms	48,357	6,675.9	12,809	1,803.0	12,621	1,713.7	12,021	1,662.3	10,906	1,496.9
Underwear and nightwear	98,888	1,664.6	26,223	443.6	25,479	431.4	25,235	436.8	21,951	352.8
Other garments	6,347	812.3	1,470	203.9	1,601	215.4	1,568	186.1	1,708	206.9
Women's and girls' apparel:										
Dresses	13,443	4,529.9	2,858	982.3	3,173	1,145.1	3,518	1,162.2	3,895	1,240.3
Coats	(D)	(D)	(D)	(D)	1,002	542.7	892	410.0	741	329.1
Tops	40,939	4,165.0	10,461	1,106.2	10,510	1,129.3	10,054	994.6	9,914	934.9
Bottoms	39,239	5,338.0	9,468	1,277.7	10,355	1,441.7	10,165	1,357.0	9,251	1,261.6
Underwear and nightwear	95,531	3,518.1	24,947	942.1	24,405	912.5	23,923	850.7	22,256	812.8
Other garments	11,660	1,644.5	3,043	397.5	2,396	329.9	2,795	395.9	3,426	521.2
Infants' apparel	14,927	690.8	3,944	175.8	3,994	207.2	3,481	155.7	3,508	152.1
Coats and jackets	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Dresses	524	66.2	125	15.8	121	18.2	139	19.9	139	12.3
Knit shirts	1,278	64.9	364	19.1	341	17.6	276	12.9	297	15.3
Woven shirts	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Sweaters	48	3.9	19	2.2	11	0.7	(D)	(D)	(D)	(D)
Sets	947	69.0	245	17.4	255	22.8	201	13.5	246	15.3
Pants and shorts	828	49.1	227	12.1	265	15.5	194	12.2	142	9.3
Play clothing	2,441	189.7	638	46.0	709	57.7	535	38.8	559	47.2
Underwear	5,935	82.3	1,570	21.1	1,433	21.6	1,430	20.0	1,502	19.6
Nightwear	2,903	161.6	751	40.8	851	51.5	692	37.4	609	31.9

(D) Data withheld to avoid disclosing figures for individual companies.

Table 40. TOTAL QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF MEN'S, JUNIOR BOYS', AND LITTLE BOYS' APPAREL: 1992 AND 1991

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992											
Suits	1,000 units	10,032	1,093.5	2,506	282.3	2,420	268.6	2,428	266.3	2,678	296.3
Trios . . . . .	. . . . .do	13	(NA)	3	(NA)	1	(NA)	2	(NA)	7	(NA)
Coats, jackets, and vests:											
Down and feather filled coats, jackets and vests. . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Dress and sport coats (tailored). . . . .	. . . . .do	13,422	808.7	3,074	189.3	3,587	214.6	3,188	190.0	3,573	214.8
Heavy nontailored coats and jackets . . . . .	. . . . .do	14,482	541.6	4,125	165.1	4,000	145.4	3,280	118.3	3,077	112.8
Lightweight nontailored coats and jackets . . . . .	. . . . .do	17,445	422.6	4,552	117.7	4,185	110.9	3,958	97.0	4,750	97.0
Overcoats and top coats . . . . .	. . . . .do	644	53.3	166	18.9	186	14.8	157	10.2	135	9.4
Raincoats . . . . .	. . . . .do	2,525	91.2	(D)	(D)	(D)	(D)	(D)	(D)	612	21.4
Separate vests . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Work jackets	1,000 dozens	295	72.7	67	25.4	83	20.7	64	10.6	81	16.0
Tops:											
Woven dress and business shirts	1,000 dozens	6,874	826.8	1,671	197.1	1,652	207.5	1,688	200.5	1,863	221.7
Woven sport shirts . . . . .	. . . . .do	2,576	327.2	687	91.8	625	85.0	586	69.7	678	80.7
Work shirts . . . . .	. . . . .do	3,447	376.8	756	109.8	951	95.9	918	86.3	822	84.8
Knit T-shirts and tank tops made for outerwear. . . . .	. . . . .do	63,176	2,856.3	15,253	646.5	15,403	726.6	16,145	741.8	16,375	741.4
Sweatshirts . . . . .	. . . . .do	21,388	1,399.4	5,617	362.6	6,030	385.8	4,651	345.5	5,090	305.5
Other knit shirts . . . . .	. . . . .do	11,096	875.2	2,631	205.2	2,658	224.4	2,959	226.9	2,848	218.7
Sweaters . . . . .	. . . . .do	1,948	255.3	481	80.6	585	80.6	523	56.7	359	37.4
Bottoms:											
Dress and sport trousers	1,000 units	108,525	1,584.2	23,837	357.4	27,691	410.7	27,506	386.8	29,491	429.3
Junior boys' dress and sport trousers . . . . .	. . . . .do	6,699	(NA)	1,303	(NA)	1,724	(NA)	1,806	(NA)	1,866	(NA)
Jean and jean-cut casual slacks . . . . .	. . . . .do	291,233	4,134.8	77,539	1,116.0	78,947	1,090.4	69,400	1,018.1	65,347	910.3
Junior boys' jean and jean-cut slacks . . . . .	. . . . .do	46,526	(NA)	11,556	(NA)	14,100	(NA)	11,631	(NA)	9,239	(NA)
Shorts . . . . .	. . . . .do	104,166	654.0	21,411	145.2	15,946	100.2	29,360	173.2	37,449	235.4
Athletic shorts . . . . .	. . . . .do	40,331	(NA)	6,952	(NA)	8,728	(NA)	12,461	(NA)	12,190	(NA)
Sweatpants	1,000 dozens	7,611	466.3	1,919	138.6	2,199	134.0	1,817	102.6	1,676	91.1
Workpants . . . . .	. . . . .do	2,750	322.8	591	85.3	698	79.6	728	79.6	733	78.3
Underwear and nightwear:											
Pajamas and nightwear	1,000 dozens	1,859	138.3	461	40.2	472	36.9	490	32.2	436	29.0
Robes . . . . .	. . . . .do	472	76.6	161	34.9	177	27.4	82	7.3	52	7.0
Underwear total . . . . .	. . . . .do	108,315	1,499.6	27,523	411.3	27,709	383.3	26,219	393.2	26,864	311.8
Thermal underwear . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Undershirts (1/4 sleeve and athletic types) . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Knit undershorts and briefs . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Woven boxer shorts . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other garments:											
Coveralls, overalls, and jumpsuits	1,000 dozens	1,313	279.0	306	79.1	345	84.7	305	49.8	357	65.4
Jumpsuits . . . . .	. . . . .do	80	(NA)	21	(NA)	19	(NA)	20	(NA)	20	(NA)
Jogging and warm-up suits . . . . .	. . . . .do	835	81.1	236	23.5	299	27.7	156	16.7	144	13.2
Playsuits . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Ski apparel . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Swimwear . . . . .	. . . . .do	463	52.6	78	7.9	67	6.6	99	16.1	219	22.0
Team sports uniforms . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Washable service apparel . . . . .	. . . . .do	1,651	136.4	393	29.7	429	35.5	384	34.0	445	37.2

See footnotes at end of table.

Table 40. TOTAL QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF MEN'S, JUNIOR BOYS', AND LITTLE BOYS' APPAREL: 1992 AND 1991—Continued

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1991											
Suits	1,000 units	9,506	1,106.5	2,386	278.3	2,253	269.7	2,294	261.5	2,573	297.0
Trios .....	.....do.....	38	(NA)	10	(NA)	7	(NA)	12	(NA)	9	(NA)
Coats, jackets, and vests:											
Down and feather filled coats, jackets and vests. ....	.....do.....	401	30.1	86	6.8	(D)	(D)	(D)	(D)	109	8.0
Dress and sport coats (tailored) .....	.....do.....	13,683	793.0	3,277	183.7	3,448	207.4	3,070	181.9	3,888	220.0
Heavy nontailored coats and jackets .....	.....do.....	12,819	433.6	3,404	124.7	3,467	118.0	2,818	92.7	3,130	98.2
Lightweight nontailored coats and jackets .....	.....do.....	16,374	351.3	5,391	129.7	3,721	76.2	3,394	58.4	3,868	87.0
Overcoats and top coats .....	.....do.....	724	55.0	185	16.6	157	11.7	198	13.5	184	13.2
Raincoats .....	.....do.....	(D)	(D)	(D)	(D)	708	30.5	811	33.0	783	31.9
Separate vests .....	.....do.....	822	12.3	(D)	(D)	(D)	(D)	(D)	(D)	245	7.9
Work jackets	1,000 dozens	305	55.7	101	20.1	67	12.2	57	10.4	80	13.0
Tops:											
Woven dress and business shirts	1,000 dozens	6,718	893.8	1,695	224.6	1,679	236.2	1,665	213.1	1,679	219.9
Woven sport shirts .....	.....do.....	2,224	268.7	552	63.0	616	75.6	482	60.0	574	70.1
Work shirts .....	.....do.....	3,362	345.2	900	98.9	853	91.9	861	82.7	748	71.7
Knit T-shirts and tank tops made for outerwear. ....	.....do.....	48,718	2,151.7	12,529	498.4	11,334	488.1	12,809	635.4	12,046	529.8
Sweatshirts .....	.....do.....	20,125	1,132.6	6,275	374.2	5,776	341.3	4,210	222.1	3,864	195.0
Other knit shirts .....	.....do.....	10,721	876.3	2,593	211.7	2,796	230.7	2,759	224.0	2,573	209.9
Sweaters .....	.....do.....	1,798	268.3	500	82.4	641	95.3	395	53.7	262	36.9
Bottoms:											
Dress and sport trousers	1,000 units	114,839	1,649.2	26,661	396.3	32,216	438.0	28,326	398.6	27,636	416.3
Junior boys' dress and sport trousers .....	.....do.....	13,551	(NA)	3,152	(NA)	4,023	(NA)	3,774	(NA)	2,602	(NA)
Jean and jean-cut casual slacks .....	.....do.....	256,541	3,658.9	70,004	1,021.2	67,666	954.8	66,204	956.0	52,667	726.9
Junior boys' jean and jean-cut slacks .....	.....do.....	42,340	(NA)	11,309	(NA)	11,430	(NA)	11,750	(NA)	7,851	(NA)
Shorts .....	.....do.....	80,303	483.3	20,589	134.8	15,095	100.2	19,527	104.0	25,092	144.3
Athletic shorts .....	.....do.....	26,260	(NA)	7,866	(NA)	6,540	(NA)	5,850	(NA)	6,004	(NA)
Sweatpants	1,000 dozens	7,358	496.3	2,224	157.6	2,282	129.2	1,584	95.7	1,268	113.8
Workpants .....	.....do.....	3,359	388.2	814	93.1	758	91.5	932	108.0	855	95.6
Underwear and nightwear:											
Pajamas and nightwear	1,000 dozens	1,677	127.8	521	42.8	483	39.7	380	24.6	293	20.7
Robes .....	.....do.....	415	96.0	137	31.3	132	24.5	80	23.9	66	16.3
Underwear total .....	.....do.....	96,796	1,440.8	25,565	369.5	24,864	367.2	24,775	388.3	21,592	315.8
Thermal underwear .....	.....do.....	3,470	140.6	967	39.0	1,137	45.3	377	23.6	989	32.7
Undershirts (1/4 sleeve and athletic types) ....	.....do.....	48,188	526.8	12,621	129.5	12,081	121.5	12,921	146.6	10,565	129.2
Knit undershorts and briefs .....	.....do.....	39,322	611.6	10,335	155.3	10,112	155.8	10,068	178.4	8,807	122.1
Woven boxer shorts .....	.....do.....	5,816	161.8	1,642	45.7	1,534	44.6	1,409	39.7	1,231	31.8
Other garments:											
Coveralls, overalls, and jumpsuits	1,000 dozens	1,380	250.8	320	68.0	428	82.6	301	48.7	331	51.5
Jumpsuits .....	.....do.....	79	(NA)	18	(NA)	20	(NA)	22	(NA)	19	(NA)
Jogging and warm-up suits .....	.....do.....	665	66.6	215	21.6	169	17.8	140	13.1	141	14.1
Playsuits .....	.....do.....	(D)	(D)	78	6.5	(D)	(D)	97	8.5	125	10.8
Ski apparel .....	.....do.....	325	114.0	100	23.8	(D)	(D)	(D)	(D)	69	34.3
Swimwear .....	.....do.....	515	54.1	97	10.2	90	7.6	118	15.0	210	21.3
Team sports uniforms .....	.....do.....	(D)	(D)	308	37.2	257	41.8	(D)	(D)	300	36.3
Washable service apparel .....	.....do.....	1,869	139.4	352	36.6	465	30.2	520	34.0	532	38.6

(D) Data withheld to avoid disclosing figures for individual companies.

(NA) Not available.

Table 41. QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF MEN'S AND JUNIOR BOYS' APPAREL: 1992 AND 1991

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992											
Suits	1,000 units	9,780	1,085.1	2,442	260.7	2,348	266.8	2,364	263.7	2,628	293.9
Coats, jackets, and vests:											
Down and feather filled coats, jackets and vests. ....	.do.	403	29.9	113	7.8	144	13.3	70	4.4	78	4.6
Dress and sport coats (tailored). ....	.do.	13,255	800.5	3,050	187.7	3,554	212.8	3,110	187.1	3,541	213.1
Heavy nontailored coats and jackets. ....	.do.	13,919	528.9	3,976	160.5	3,827	141.7	3,132	115.8	2,984	110.9
Lightweight nontailored coats and jackets .....	.do.	15,847	396.2	4,228	112.8	3,587	102.8	3,674	93.2	4,378	87.4
Overcoats and top coats .....	.do.	644	53.3	166	18.9	186	14.8	157	10.2	135	9.4
Raincoats. ....	.do.	2,516	90.8	(D)	(D)	(D)	(D)	(D)	(D)	610	21.3
Separate vests .....	.do.	209	4.5	50	1.0	40	1.0	64	1.2	55	1.3
Work jackets	1,000 dozens ..	295	72.7	67	25.4	83	20.7	64	10.6	81	16.0
Tops:											
Woven dress and business shirts	1,000 dozens ...	6,536	805.3	1,590	192.3	1,583	201.8	1,611	196.7	1,752	214.5
Woven sport shirts .....	.do.	2,248	306.5	607	86.8	540	79.1	520	65.5	581	75.1
Work shirts .....	.do.	3,447	376.8	756	109.8	951	95.9	918	86.3	822	84.8
Knit T-shirts and tank tops made for outerwear. ...	.do.	61,259	2,785.5	14,815	629.8	15,048	710.4	15,705	725.7	15,691	719.6
Sweatshirts .....	.do.	20,733	1,364.5	5,522	358.2	5,834	375.7	4,499	336.5	4,878	294.1
Other knit shirts .....	.do.	8,403	741.7	2,049	176.3	1,918	187.0	2,268	194.7	2,168	183.7
Sweaters .....	.do.	1,654	234.6	434	76.9	467	71.7	452	52.5	301	33.5
Bottoms:											
Dress and sport trousers	1,000 units	96,771	1,513.8	20,875	340.5	24,845	390.6	24,555	371.8	26,496	410.9
Jean and jean-cut casual slacks .....	.do.	268,689	3,909.9	72,437	1,060.1	72,580	1,027.1	63,119	960.7	60,553	862.0
Shorts .....	.do.	81,481	555.2	16,245	119.9	13,288	86.6	23,222	148.3	28,726	200.4
Sweatpants	1,000 dozens ...	6,545	416.8	1,724	132.4	1,789	112.8	1,575	93.3	1,457	78.3
Workpants .....	.do.	2,750	322.8	591	85.3	698	79.6	728	79.6	733	78.3
Underwear and nightwear:											
Pajamas and nightwear	1,000 dozens ...	1,419	110.0	382	34.8	353	28.8	370	24.7	314	22
Robes .....	.do.	450	74.4	156	34.3	163	26.1	80	7.1	51	7
Underwear total .....	.do.	100,299	1,285.1	25,749	364.1	25,587	325.2	23,971	325.7	24,992	270.1
Thermal underwear. ....	.do.	3,431	156.3	1,188	53.8	992	45.0	741	35.1	510	22.4
Undershirts (1/4 sleeve and athletic types) ....	.do.	51,555	458.6	13,146	124.3	12,998	109.0	12,515	122.1	12,896	103.2
Knit undershorts and briefs .....	.do.	38,262	481.8	9,765	139.0	9,788	119.9	8,911	123.2	9,798	99.7
Woven boxer shorts .....	.do.	7,051	188.4	1,650	47.0	1,809	51.3	1,804	45.3	1,788	44.8
Other garments:											
Coveralls, overalls, and jumpsuits	1,000 dozens .l.	914	235.2	216	69.2	237	71.8	230	41.7	231	52.5
Jogging and warm-up suits .....	.do.	236	35.4	54	9.5	59	9.5	51	8.7	72	7.7
Playsuits. ....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Ski apparel. ....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Swimwear. ....	.do.	393	46.1	69	7.2	66	6.4	83	14.2	175	18.3
Team sports uniforms .....	.do.	1,448	186.0	393	41.6	326	48.1	333	44.7	396	51.6
Washable service apparel .....	.do.	1,651	136.4	393	29.7	429	35.5	384	34.0	445	37.2

See footnote at end of table.

Table 41. QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF MEN'S AND JUNIOR BOYS' APPAREL: 1992 AND 1991—Continued

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1991											
Suits	1,000 units	9,343	1,101.8	2,344	277.5	(D)	(D)	(D)	(D)	2,523	295.4
Coats, jackets, and vests:											
Down and feather filled coats, jackets and vests. ....	.do.	(D)	(D)	(D)	(D)	115	10.3	89	4.8	(D)	(D)
Dress and sport coats (tailored).....	.do.	(D)	(D)	3,256	183.2	3,415	206.5	(D)	(D)	3,821	217.4
Heavy nontailored coats and jackets .....	.do.	12,235	417.4	3,289	122.5	3,266	112.2	2,644	86.0	3,036	96.7
Lightweight nontailored coats and jackets.....	.do.	15,196	339.6	5,000	124.9	3,449	74.2	3,178	57.2	3,569	83.3
Overcoats and top coats .....	.do.	724	55.0	185	16.6	157	11.7	198	13.5	184	13.2
Raincoats.....	.do.	3,016	130.2	714	34.8	(D)	(D)	(D)	(D)	(D)	(D)
Separate vests.....	.do.	(D)	(D)	44	1.0	51	1.2	(D)	(D)	(D)	(D)
Work jackets	1,000 dozens	305	55.7	101	20.1	67	12.2	57	10.4	80	13.0
Tops:											
Woven dress and business shirts	1,000 dozens	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Woven sport shirts.....	.do.	1,982	252.8	494	59.7	538	69.7	429	56.6	521	66.8
Work shirts.....	.do.	3,362	345.2	900	98.9	853	91.9	861	82.7	748	71.7
Knit T-shirts and tank tops made for outerwear.....	.do.	47,062	2,091.6	12,083	483.8	10,998	473.0	12,391	620.8	11,590	514.0
Sweatshirts.....	.do.	19,788	1,115.6	6,216	370.9	5,664	335.2	4,118	218.0	3,790	191.5
Other knit shirts.....	.do.	8,219	714.5	2,016	176.6	2,006	176.4	2,191	188.4	2,006	173.1
Sweaters .....	.do.	1,534	248.4	441	78.4	549	88.6	347	48.7	197	32.7
Bottoms:											
Dress and sport trousers	1,000 units	102,690	1,568.4	24,028	379.7	28,067	412.0	25,763	383.1	24,832	393.6
Jean and jean-cut casual slacks .....	.do.	237,100	3,464.6	65,519	970.8	62,351	899.5	61,274	908.4	47,956	685.9
Shorts .....	.do.	64,124	417.4	16,511	116.9	12,205	84.0	15,223	90.6	20,185	125.9
Sweatpants	1,000 dozens	7,026	481.5	2,175	155.5	2,148	123.3	1,467	91.6	1,236	111.1
Workpants .....	.do.	3,359	388.2	814	93.1	758	91.5	932	108.0	855	95.6
Underwear and nightwear:											
Pajamas and nightwear	1,000 dozens	1,199	96.9	364	32.9	316	28.2	274	18.3	245	17.5
Robes .....	.do.	398	94.0	131	30.7	124	23.5	78	23.6	65	16.2
Underwear total .....	.do.	89,594	1,260.3	23,708	325.3	22,970	312.9	23,041	336.2	19,875	285.9
Thermal underwear.....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Undershirts (1/4 sleeve and athletic types) .....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Knit undershorts and briefs .....	.do.	33,366	486.6	(D)	(D)	(D)	(D)	(D)	(D)	7,406	102.8
Woven boxer shorts.....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other garments:											
Coveralls, overalls, and jumpsuits	1,000 dozens	894	202.9	224	57.5	245	65.3	209	39.3	216	40.8
Jogging and warm-up suits .....	.do.	249	30.1	63	8.8	62	8.1	53	5.5	71	7.7
Playsuits.....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Ski apparel.....	.do.	325	114.0	100	23.8	(D)	(D)	(D)	(D)	69	34.3
Swimwear.....	.do.	451	48.6	90	9.5	82	7.2	110	14.1	169	17.8
Team sports uniforms .....	.do.	1,179	149.6	(D)	(D)	247	40.0	337	38.7	(D)	(D)
Washable service apparel .....	.do.	1,869	139.4	352	36.6	465	30.2	520	34.0	532	38.6

(D) Data withheld to avoid disclosing figures for individual companies.

Table 42. QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF LITTLE BOYS' APPAREL: 1992 AND 1991

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992											
Suits	1,000 units	252	8.4	64	1.6	74	1.8	64	2.6	50	2.4
Coats, jackets, and vests:											
Down and feather filled coats, jackets, and vests	do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Dress and sport coats (tailored)	do	167	8.2	24	1.6	33	2.0	78	2.9	32	1.7
Heavy nontailored coats and jackets	do	563	12.7	149	4.6	173	3.7	148	2.5	93	1.9
Lightweight nontailored coats and jackets	do	1,598	26.4	324	4.9	618	8.1	284	3.8	372	9.6
Overcoats and top coats	do	-	-	-	-	-	-	-	-	-	-
Raincoats	do	9	0.4	2	0.1	3	0.1	2	0.1	2	0.1
Separate vests	do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Work jackets	1,000 dozens	-	-	-	-	-	-	-	-	-	-
Tops:											
Woven dress and business shirts	1,000 dozens	338	21.5	81	4.8	69	5.7	77	3.8	111	7.2
Woven sport shirts	do	328	20.7	80	5.0	85	5.9	66	4.2	97	5.6
Work shirts	do	-	-	-	-	-	-	-	-	-	-
Knit T-shirts and tank tops made for outerwear	do	1,917	70.8	438	16.7	355	16.2	440	16.1	684	21.8
Sweatshirts	do	655	34.9	95	4.4	196	10.1	152	9.0	212	11.4
Other knit shirts	do	2,693	133.5	582	28.9	740	37.4	691	32.2	680	35.0
Sweaters	do	294	20.7	47	3.7	118	8.9	71	4.2	58	3.9
Bottoms:											
Dress and sport trousers	1,000 units	11,754	70.4	2,962	16.9	2,846	20.1	2,951	15.0	2,995	18.4
Jean and jean-cut casual slacks	do	22,544	224.9	5,102	55.9	6,367	63.3	6,281	57.4	4,794	48.3
Shorts	do	22,685	98.8	5,166	25.3	2,658	13.6	6,138	24.9	8,723	35.0
Sweatpants	1,000 dozens	1,066	49.5	195	6.2	410	21.2	242	9.3	219	12.8
Workpants	do	-	-	-	-	-	-	-	-	-	-
Underwear and nightwear:											
Pajamas and nightwear	1,000 dozens	440	28.3	79	5.4	119	8.1	120	7.5	122	7.3
Robes	do	22	2.2	5	0.6	14	1.3	2	0.2	1	0.1
Underwear total	do	8,016	214.5	1,774	47.2	2,122	58.1	2,248	67.5	1,872	41.7
Thermal underwear	do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Undershirts (1/4 sleeve and athletic types)	do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Knit undershorts and briefs	do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Woven boxer shorts	do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other garments:											
Coveralls, overalls, and jumpsuits	1,000 dozens	399	43.8	90	9.9	108	12.9	75	8.1	126	12.9
Jogging and warm-up suits	do	599	45.7	182	14.0	240	18.2	105	8.0	72	5.5
Playsuits	do	275	22.3	63	4.8	49	4.0	55	4.3	108	9.2
Ski apparel	do	-	-	-	-	-	-	-	-	-	-
Swimwear	do	70	6.5	9	0.7	1	0.2	16	1.9	44	3.7
Team sports uniforms	do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Washable service apparel	do	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

Table 42. QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF LITTLE BOYS' APPAREL: 1992 AND 1991—Continued

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1991											
Suits	1,000 units	163	4.7	42	0.8	(D)	(D)	(D)	(D)	50	1.6
Coats, jackets, and vests:											
Down and feather filled coats, jackets, and vests .....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Dress and sport coats (tailored) .....	.do.	(D)	(D)	21	0.5	33	0.9	(D)	(D)	67	2.6
Heavy nontailored coats and jackets .....	.do.	584	16.2	115	2.2	201	5.8	174	6.7	94	1.5
Lightweight nontailored coats and jackets .....	.do.	1,178	11.7	391	4.8	272	2.0	216	1.2	299	3.7
Overcoats and top coats .....	.do.	-	-	-	-	-	-	-	-	-	-
Raincoats .....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Separate vests .....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Work jackets	1,000 dozens	-	-	-	-	-	-	-	-	-	-
Tops:											
Woven dress and business shirts	1,000 dozens	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Woven sport shirts .....	.do.	242	15.9	58	3.3	78	5.9	53	3.4	53	3.3
Work shirts .....	.do.	-	-	-	-	-	-	-	-	-	-
Knit T-shirts and tank tops made for outerwear .....	.do.	1,656	60.1	446	14.6	336	15.1	418	14.6	456	15.8
Sweatshirts .....	.do.	337	17.0	59	3.3	112	6.1	92	4.1	74	3.5
Other knit shirts .....	.do.	2,502	161.8	577	35.1	790	54.3	568	35.6	567	36.8
Sweaters .....	.do.	264	19.9	59	4.0	92	6.7	48	5.0	65	4.2
Bottoms:											
Dress and sport trousers	1,000 units	12,149	80.8	2,633	16.6	4,149	26.0	2,563	15.5	2,804	22.7
Jean and jean-cut casual slacks .....	.do.	19,441	194.3	4,485	50.4	5,315	55.3	4,930	47.6	4,711	41.0
Shorts .....	.do.	16,179	65.9	4,078	17.9	2,890	16.2	4,304	13.4	4,907	18.4
Sweatpants	1,000 dozens	332	14.8	49	2.1	134	5.9	117	4.1	32	2.7
Workpants .....	.do.	-	-	-	-	-	-	-	-	-	-
Underwear and nightwear:											
Pajamas and nightwear	1,000 dozens	478	30.9	157	9.9	167	11.5	106	6.3	48	3.2
Robes .....	.do.	17	2.0	6	0.6	8	1.0	2	0.3	1	0.1
Underwear total .....	.do.	7,202	180.5	1,857	44.2	1,894.0	54.3	1,734.0	52.1	1,717.0	29.9
Thermal underwear .....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Undershirts (1/4 sleeve and athletic types) .....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Knit undershorts and briefs .....	.do.	5,956	125.0	(D)	(D)	(D)	(D)	(D)	(D)	1,401	19.3
Woven boxer shorts .....	.do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other garments:											
Coveralls, overalls, and jumpsuits	1,000 dozens	486	47.9	96	10.5	183	17.3	92	9.4	115	10.7
Jogging and warm-up suits .....	.do.	416	36.5	152	12.8	107	9.7	87	7.6	70	6.4
Playsuits .....	.do.	362	30.7	(D)	(D)	80	6.3	(D)	(D)	(D)	(D)
Ski apparel .....	.do.	-	-	-	-	-	-	-	-	-	-
Swimwear .....	.do.	64	5.5	7	0.7	8	0.4	8	0.9	41	3.5
Team sports uniforms .....	.do.	(D)	(D)	(D)	(D)	10	1.8	(D)	(D)	(D)	(D)
Washable service apparel .....	.do.	-	-	-	-	-	-	-	-	-	-

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

Table 43. TOTAL QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF WOMEN'S, MISSES, JUNIORS, AND GIRLS' APPAREL: 1992 AND 1991

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992											
Dresses	1,000 units	157,898	4,226.2	34,440	931.2	35,753	1,032.5	42,106	1,072.8	45,599	1,189.7
Coats, jackets, and vests:											
Coats and capes	1,000 units	7,166	501.1	(D)	(D)	(D)	(D)	1,691	102.7	1,070	61.2
Down and feather filled coats, jackets, and vests . . . . .	. . . . .do	31	3.2	(D)	(D)	10	1.2	(D)	(D)	7	0.5
Nontailored jackets . . . . .	. . . . .do	10,317	213.6	2,186	53.5	3,278	62.2	2,553	50.5	2,300	47.4
Raincoats . . . . .	. . . . .do	1,131	72.8	(D)	(D)	(D)	(D)	(D)	(D)	232	15.1
Separate vests . . . . .	. . . . .do	671	9.6	(D)	(D)	(D)	(D)	126	1.9	67	1.3
Tailored suit-type jackets . . . . .	. . . . .do	27,148	1,036.0	(D)	(D)	7,129	286.1	(D)	(D)	6,826	245.1
Tops:											
Woven blouses and shirts	1,000 dozens	15,950	1,944.6	3,728	458.3	3,709	485.3	4,078	474.2	4,435	526.8
Knit T-shirts and tank tops made for outerwear . . . . .	. . . . .do	9,914	643.3	2,317	157.2	2,003	143.8	2,588	172.4	3,006	169.9
Sweatshirts . . . . .	. . . . .do	3,557	231.4	901	55.1	1,462	87.2	585	48.0	609	41.1
Other knit blouses and shirts . . . . .	. . . . .do	8,523	696.4	1,806	159.5	2,415	185.3	2,184	168.9	2,118	182.7
Sweaters, including coat, cardigan, pullover, and vest sweaters . . . . .	. . . . .do	3,212	512.4	797	142.2	912	155.4	878	124.1	625	90.7
Bottoms:											
Shorts	1,000 units	79,441	591.9	14,041	118.0	12,823	108.4	24,522	167.4	28,055	198.1
Skirts and divided skirts . . . . .	. . . . .do	91,701	1,471.5	20,309	344.1	22,639	388.0	23,380	353.6	25,373	385.8
Slacks, pants, and jeans, including jean-cut casual slacks . . . . .	. . . . .do	319,578	3,591.4	73,925	953.3	87,811	983.7	83,240	860.7	74,602	793.7
Sweatpants	1,000 dozens	2,497	123.6	679	31.8	902	45.3	419	21.9	497	24.6
Underwear and nightwear:											
Brassieres, bra-lettes, and bandeaux	1,000 dozens	19,844	1,219.2	4,833	296.3	5,408	338.4	4,821	300.8	4,782	283.7
Total produced in Puerto Rico . . . . .	. . . . .do	3,530	(NA)	866	(NA)	885	(NA)	892	(NA)	887	(NA)
Girdles, corsets, and other foundation garments . . . . .	. . . . .do	6,446	328.0	1,435	72.1	1,634	85.2	1,603	83.1	1,774	87.6
Total produced in Puerto Rico . . . . .	. . . . .do	827	(NA)	119	(NA)	235	(NA)	230	(NA)	243	(NA)
Nightgowns, pajamas, and other nightwear . . . . .	. . . . .do	8,790	777.7	2,176	214.1	2,225	219.7	2,143	167.4	2,246	176.5
Other underwear, including camisoles, teddies, undershirts, and union suits . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Panties . . . . .	. . . . .do	57,473	799.9	13,942	180.4	15,778	221.2	14,761	215.7	12,992	182.6
Robes and dressing gowns . . . . .	. . . . .do	1,472	237.9	407	73.1	400	73.2	282	37.3	383	54.3
Slips . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other garments:											
Bodysuits and bodyshirts	1,000 dozens	1,345	148.0	356	40.9	357	40.5	308	32.6	324	34.0
Jogging and warm-up suits . . . . .	. . . . .do	1,243	118.1	255	23.5	357	35.6	300	28.5	331	30.5
Overalls, coveralls, and jumpsuits . . . . .	. . . . .do	671	85.4	109	14.7	146	19.2	138	19.3	278	32.2
Playsuits, rompers, halters, etc . . . . .	. . . . .do	1,333	97.8	319	18.3	300	27.0	340	21.1	374	31.4
Ski apparel . . . . .	. . . . .do	89	43.0	(D)	(D)	27	16.8	(D)	(D)	18	4.9
Suits, including pant suits . . . . .	. . . . .do	786	278.7	181	69.0	170	67.6	233	72.2	202	69.9
Swimwear . . . . .	. . . . .do	3,871	625.1	1,039	122.8	492	58.6	1,029	188.0	1,311	255.7
Washable service apparel . . . . .	. . . . .do	2,310	244.7	532	58.2	583	62.7	606	61.9	589	61.9
Smocks and lab coats . . . . .	. . . . .do	724	(NA)	162	(NA)	181	(NA)	196	(NA)	185	(NA)
Uniform dresses . . . . .	. . . . .do	524	(NA)	119	(NA)	130	(NA)	150	(NA)	125	(NA)
Uniform pant sets . . . . .	. . . . .do	161	(NA)	37	(NA)	41	(NA)	42	(NA)	41	(NA)
All other garment types . . . . .	. . . . .do	348	(NA)	79	(NA)	88	(NA)	81	(NA)	100	(NA)

See footnotes at end of table.

Table 43. TOTAL QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF WOMEN'S, MISSES, JUNIORS, AND GIRLS' APPAREL: 1992 AND 1991—Continued

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1991											
Dresses	1,000 units	161,320	4,529.9	34,300	982.3	38,073	1,145.1	42,212	1,162.2	46,735	1,240.3
Coats, jackets, and vests:											
Coats and capes	1,000 units	8,031	544.6	2,188	172.0	2,632	204.4	2,039	99.3	1,172	68.9
Down and feather filled coats, jackets, and vests . . . . .	. . . . .do	(D)	(D)	(D)	(D)	7	0.9	5	0.4	7	0.8
Nontailored jackets . . . . .	. . . . .do	8,665	233.0	2,477	53.3	2,400	68.3	1,870	60.1	1,918	51.3
Raincoats . . . . .	. . . . .do	1,582	99.6	228	14.9	(D)	(D)	(D)	(D)	355	21.6
Separate vests . . . . .	. . . . .do	287	4.0	(D)	(D)	(D)	(D)	(D)	(D)	50	0.5
Tailored suit-type jackets . . . . .	. . . . .do	24,863	881.0	6,873	241.0	6,396	235.4	6,204	218.6	5,390	186.0
Tops:											
Woven blouses and shirts	1,000 dozens	14,981	2,065.2	3,421	499.8	3,731	552.4	4,092	531.4	3,737	481.6
Knit T-shirts and tank tops made for outerwear . . . . .	. . . . .do	9,964	608.1	2,277	144.1	2,005	134.3	2,492	153.3	3,190	176.4
Sweatshirts . . . . .	. . . . .do	4,164	264.6	1,562	100.0	1,233	83.3	727	40.5	642	40.8
Other knit blouses and shirts . . . . .	. . . . .do	8,785	758.2	2,264	197.9	2,602	219.1	2,099	177.4	1,820	163.8
Sweaters, including coat, cardigan, pullover, and vest sweaters . . . . .	. . . . .do	3,045	468.9	937	164.4	939	140.2	644	92.0	525	72.3
Bottoms:											
Shorts	1,000 units	62,456	461.9	13,899	100.3	11,251	84.5	16,018	107.3	21,288	169.8
Skirts and divided skirts . . . . .	. . . . .do	93,093	1,511.0	21,239	364.2	25,906	423.5	23,627	373.6	22,321	349.7
Slacks, pants, and jeans, including jean-cut casual slacks . . . . .	. . . . .do	280,778	3,222.7	65,203	761.1	77,347	889.7	75,204	848.1	63,024	723.8
Sweatpants	1,000 dozens	2,878	142.4	1,106	52.1	813	44.0	594	28.0	365	18.3
Underwear and nightwear:											
Brassieres, bra-lettes, and bandeaux	1,000 dozens	17,990	1,061.1	4,501	266.7	4,595	277.0	4,602	277.3	4,292	240.1
Total produced in Puerto Rico . . . . .	. . . . .do	3,502	(NA)	768	(NA)	825	(NA)	994	(NA)	915	(NA)
Girdles, corsets, and other foundation garments . . . . .	. . . . .do	5,959	306.7	1,750	91.3	1,415	74.7	1,450	76.2	1,344	64.5
Total produced in Puerto Rico . . . . .	. . . . .do	850	(NA)	250	(NA)	203	(NA)	207	(NA)	190	(NA)
Nightgowns, pajamas, and other nightwear . . . . .	. . . . .do	9,074	812.2	2,447	232.6	2,324	213.2	2,074	174.0	2,229	192.4
Other underwear, including camisoles, teddies, undershirts, and union suits . . . . .	. . . . .do	3,685	209.5	1,024	58.2	976	53.1	908	49.8	777	48.4
Panties . . . . .	. . . . .do	55,573	763.1	14,403	187.2	14,242	194.3	14,144	200.3	12,784	181.3
Robes and dressing gowns . . . . .	. . . . .do	1,573	264.8	433	82.7	441	76.8	318	49.9	381	55.4
Slips . . . . .	. . . . .do	1,677	100.7	389	23.4	412	23.4	427	23.2	449	30.7
Other garments:											
Bodysuits and bodyshirts	1,000 dozens	1,105	116.6	295	31.0	295	31.2	313	31.9	202	22.5
Jogging and warm-up suits . . . . .	. . . . .do	1,393	142.3	447	44.7	327	38.4	285	27.5	334	31.7
Overalls, coveralls, and jumpsuits . . . . .	. . . . .do	758	99.0	142	19.1	282	30.3	158	23.8	176	25.8
Playsuits, rompers, halters, etc . . . . .	. . . . .do	1,368	110.8	368	26.3	262	25.7	401	24.8	337	34.0
Ski apparel . . . . .	. . . . .do	100	40.9	19	12.1	40	14.6	22	8.1	19	6.1
Suits, including pant suits . . . . .	. . . . .do	867	310.5	200	80.1	201	77.3	217	73.5	249	79.6
Swimwear . . . . .	. . . . .do	3,903	593.4	1,017	127.1	424	51.0	916	153.9	1,546	261.4
Washable service apparel . . . . .	. . . . .do	2,166	231.0	555	57.1	565	61.4	483	52.4	563	60.1
Smocks and lab coats . . . . .	. . . . .do	615	(NA)	185	(NA)	189	(NA)	137	(NA)	104	(NA)
Uniform dresses . . . . .	. . . . .do	523	(NA)	119	(NA)	124	(NA)	106	(NA)	174	(NA)
Uniform pant sets . . . . .	. . . . .do	177	(NA)	39	(NA)	41	(NA)	34	(NA)	63	(NA)
All other garment types . . . . .	. . . . .do	290	(NA)	91	(NA)	82	(NA)	80	(NA)	37	(NA)

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available.

Table 44. QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF WOMEN'S, MISSES', AND JUNIORS APPAREL: 1992 AND 1991

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992											
Dresses	1,000 units	118,262	3,734.2	25,625	813.5	27,458	913.2	31,900	957.9	33,279	1,049.6
Coats, jackets, and vests:											
Coats and capes	1,000 units	6,855	488.5	1,922	149.6	2,345	180.6	1,568	98.8	1,020	56.5
Down and feather filled coats, jackets, and vests . . . . .	. . . . .do	31	3.2	(D)	(D)	10	1.2	(D)	(D)	7	0.5
Nontailored jackets . . . . .	. . . . .do	9,555	205.9	2,009	51.7	3,068	59.7	2,443	49.3	2,035	45.2
Raincoats . . . . .	. . . . .do	1,131	72.8	(D)	(D)	(D)	(D)	(D)	(D)	232	15.1
Separate vests . . . . .	. . . . .do	643	9.2	189	2.5	274	3.7	120	1.8	60	1.2
Tailored suit-type jackets . . . . .	. . . . .do	27,071	1,034.0	6,790	253.0	7,101	285.4	6,370	251.0	6,810	244.6
Tops:											
Woven blouses and shirts	1,000 dozens	14,196	1,793.2	3,306	417.9	3,305	445.2	3,575	434.0	4,010	496.1
Knit T-shirts and tank tops made for outerwear . . . . .	. . . . .do	6,848	500.7	1,688	125.6	1,424	114.6	1,766	134.1	1,970	126.4
Sweatshirts . . . . .	. . . . .do	2,845	190.8	732	45.6	1,179	71.4	427	37.6	507	36.2
Other knit blouses and shirts . . . . .	. . . . .do	5,758	519.4	1,219	121.4	1,682	136.0	1,504	128.4	1,353	133.6
Sweaters, including coat, cardigan, pullover, and vest sweaters . . . . .	. . . . .do	2,918	483.5	723	135.1	830	147.8	779	113.9	566	86.7
Bottoms:											
Shorts	1,000 units	58,037	481.1	9,677	95.2	10,335	90.6	18,083	137.4	19,942	157.9
Skirts and divided skirts . . . . .	. . . . .do	84,804	1,418.7	18,427	330.3	21,034	374.4	21,744	342.0	23,599	372.0
Slacks, pants, and jeans, including jean-cut casual slacks . . . . .	. . . . .do	287,985	3,366.0	67,185	905.0	78,321	918.6	74,047	794.7	68,432	747.7
Sweatpants	1,000 dozens	1,945	98.2	561	26.0	686	35.7	302	15.7	396	20.8
Underwear and nightwear:											
Brassieres, bra-lettes, and bandeaux	1,000 dozens	19,842	1,219.0	4,833	296.3	5,408	338.4	4,820	300.7	4,781	263.6
Girdles, corsets, and other foundation garments . . . . .	. . . . .do	6,446	328.0	1,435	72.1	1,634	85.2	1,603	83.1	1,774	87.6
Nightgowns, pajamas, and other nightwear . . . . .	. . . . .do	6,084	615.6	1,486	163.9	1,510	165.5	1,543	142.2	1,545	144.0
Other underwear, including camisoles, teddies, undershirts, and union suits . . . . .	. . . . .do	3,365	207.0	823	51.2	941	58.9	747	46.9	854	50.0
Panties . . . . .	. . . . .do	45,934	702.8	11,529	160.7	12,255	192.8	11,820	190.4	10,330	158.9
Robes and dressing gowns . . . . .	. . . . .do	1,408	231.7	399	72.1	376	70.2	269	36.2	364	53.2
Slips . . . . .	. . . . .do	1,120	61.0	245	12.6	300	15.4	291	17.1	284	15.9
Other garments:											
Bodysuits and bodyshirts	1,000 dozens	1,186	128.8	318	36.0	316	35.5	268	28.0	284	29.3
Jogging and warm-up suits . . . . .	. . . . .do	274	47.6	54	9.6	58	11.7	65	12.0	97	14.3
Overalls, coveralls, and jumpsuits . . . . .	. . . . .do	282	44.6	28	6.2	35	7.2	63	11.2	156	20.0
Playsuits, rompers, halters, etc . . . . .	. . . . .do	357	37.2	66	6.9	105	8.6	99	11.2	87	10.5
Ski apparel . . . . .	. . . . .do	89	43.0	(D)	(D)	27	16.8	(D)	(D)	18	4.9
Suits, including pant suits . . . . .	. . . . .do	704	267.3	159	66.6	157	66.0	216	70.5	172	64.2
Swimwear . . . . .	. . . . .do	3,089	548.2	781	105.6	378	42.7	902	175.4	1,028	224.5
Washable service apparel . . . . .	. . . . .do	2,310	244.7	532	58.2	583	62.7	606	61.9	589	61.9

See footnotes at end of table.

Table 44. **QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF WOMEN'S, MISSES', AND JUNIORS APPAREL: 1992 AND 1991—Continued**

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1991											
Dresses	1,000 units	120,885	3,952.8	25,346	851.0	28,354	986.8	31,499	1,016.7	35,686	1,098.3
Coats, jackets, and vests:											
Coats and capes	1,000 units	7,705	527.5	2,130	167.6	2,540	197.8	1,950	95.5	1,085	66.6
Down and feather filled coats, jackets, and vests . . . . .	. . . . .do.	(D)	(D)	(D)	(D)	7	0.9	5	0.4	7	0.8
Nontailored jackets . . . . .	. . . . .do.	(D)	(D)	(D)	(D)	2,115	65.4	1,575	55.4	1,659	48.1
Raincoats . . . . .	. . . . .do.	1,582	99.6	228	14.9	(D)	(D)	(D)	(D)	355	21.6
Separate vests . . . . .	. . . . .do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Tailored suit-type jackets . . . . .	. . . . .do.	24,815	879.4	6,856	240.4	6,379	234.8	(D)	(D)	(D)	(D)
Tops:											
Woven blouses and shirts	1,000 dozens	13,343	1,902.5	2,988	463.8	3,288	496.5	3,673	492.2	3,394	450.0
Knit T-shirts and tank tops made for outerwear . . . . .	. . . . .do.	6,675	465.7	1,516	110.9	1,367	104.0	1,632	115.4	2,160	135.4
Sweatshirts . . . . .	. . . . .do.	3,593	233.9	1,365	89.3	1,024	71.4	641	36.2	563	37.0
Other knit blouses and shirts . . . . .	. . . . .do.	5,169	501.1	1,428	134.9	1,408	135.1	1,241	121.2	1,092	109.9
Sweaters, including coat, cardigan, pullover, and vest sweaters . . . . .	. . . . .do.	2,691	433.1	838	151.6	802	128.5	570	84.5	481	68.5
Bottoms:											
Shorts	1,000 units	45,600	370.5	10,758	84.8	7,177	61.5	12,704	92.4	14,961	131.8
Skirts and divided skirts . . . . .	. . . . .do.	86,767	1,452.6	19,651	351.3	24,219	406.0	22,178	360.6	20,719	334.7
Slacks, pants, and jeans, including jean-cut casual slacks . . . . .	. . . . .do.	249,134	2,977.6	58,558	714.7	67,334	817.6	66,155	776.2	57,087	669.1
Sweatpants	1,000 dozens	2,359	121.4	(D)	(D)	678	38.1	483	23.3	(D)	(D)
Underwear and nightwear:											
Brassieres, bra-lettes, and bandeaux	1,000 dozens	(D)	(D)	4,500	266.6	4,593	276.9	(D)	(D)	4,290	240.0
Girdles, corsets, and other foundation garments . . . . .	. . . . .do.	5,959	306.7	1,750	91.3	1,415	74.7	1,450	76.2	1,344	64.5
Nightgowns, pajamas, and other nightwear . . . . .	. . . . .do.	6,562	660.8	1,727	183.9	1,668	166.7	1,546	149.4	1,621	160.8
Other underwear, including camisoles, teddies, undershirts, and union suits . . . . .	. . . . .do.	3,291	200.6	867	54.5	889	51.2	828	48.3	707	46.6
Panties . . . . .	. . . . .do.	47,065	685.4	12,067	167.0	11,883	171.3	11,738	179.7	11,377	167.4
Robes and dressing gowns . . . . .	. . . . .do.	1,515	258.8	421	81.3	414	73.7	307	49.0	373	54.8
Slips . . . . .	. . . . .do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other garments:											
Bodysuits and bodyshirts	1,000 dozens	(D)	(D)	280	28.8	280	28.8	(D)	(D)	182	19.6
Jogging and warm-up suits . . . . .	. . . . .do.	524	69.4	178	21.7	122	18.4	105	14.1	119	15.2
Overalls, coveralls, and jumpsuits . . . . .	. . . . .do.	239	44.8	38	7.7	83	10.9	61	12.9	57	13.3
Playsuits, rompers, halters, etc . . . . .	. . . . .do.	295	40.6	71	10.0	68	8.6	80	11.3	76	10.7
Ski apparel . . . . .	. . . . .do.	100	40.9	19	12.1	40	14.6	22	8.1	19	6.1
Suits, including pant suits . . . . .	. . . . .do.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Swimwear . . . . .	. . . . .do.	3,226	536.9	807	115.1	344	45.9	808	143.5	1,267	232.4
Washable service apparel . . . . .	. . . . .do.	2,166	231.0	555	57.1	565	61.4	483	52.4	563	60.1

(D) Data withheld to avoid disclosing figures for individual companies.

Table 45. QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF LITTLE GIRLS' APPAREL: 1992 AND 1991

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992											
Dresses	1,000 units	39,636	492.0	8,815	117.7	8,295	119.3	10,206	114.9	12,320	140.1
Coats, jackets, and vests:											
Coats and capes	1,000 units	311	12.6	(D)	(D)	(D)	(D)	123	3.9	50	1.7
Down and feather filled coats, jackets, and vests . . . . .	. . . . .do	-	-	-	-	-	-	-	-	-	-
Nontailored jackets . . . . .	. . . . .do	762	7.7	177	1.8	210	2.5	110	1.2	265	2.2
Raincoats . . . . .	. . . . .do	-	-	-	-	-	-	-	-	-	-
Separate vests . . . . .	. . . . .do	28	0.4	(D)	(D)	(D)	(D)	6	0.1	7	0.1
Tailored suit-type jackets . . . . .	. . . . .do	77	2.0	(D)	(D)	28	0.7	(D)	(D)	16	0.5
Tops:											
Woven blouses and shirts	1,000 dozens	1,754	151.4	422	40.4	404	40.1	503	40.2	425	30.7
Knit T-shirts and tank tops made for outerwear . . . . .	. . . . .do	3,066	142.6	629	31.6	579	29.2	822	38.3	1,036	43.5
Sweatshirts . . . . .	. . . . .do	712	40.6	169	9.5	283	15.8	158	10.4	102	4.9
Other knit blouses and shirts . . . . .	. . . . .do	2,765	177.0	587	38.1	733	49.3	680	40.5	765	49.1
Sweaters, including coat, cardigan, pullover, and vest sweaters . . . . .	. . . . .do	294	28.9	74	7.1	82	7.6	99	10.2	39	4.0
Bottoms:											
Shorts	1,000 units	21,404	110.8	4,364	22.8	2,488	17.8	6,439	30.0	8,113	40.2
Skirts and divided skirts . . . . .	. . . . .do	6,897	52.8	1,882	13.8	1,605	13.6	1,636	11.6	1,774	13.8
Slacks, pants, and jeans, including jean-cut casual slacks . . . . .	. . . . .do	31,593	225.4	6,740	48.3	9,490	65.1	9,193	66.0	6,170	46.0
Sweatpants	1,000 dozens	552	25.4	118	5.8	216	9.6	117	6.2	101	3.8
Underwear and nightwear:											
Brassieres, bra-lettes, and bandeaux	1,000 dozens	2	0.2	-	-	-	-	1	0.1	1	0.1
Girdles, corsets, and other foundation garments . . . . .	. . . . .do	-	-	-	-	-	-	-	-	-	-
Nightgowns, pajamas, and other nightwear . . . . .	. . . . .do	2,706	162.1	690	50.2	715	54.2	600	25.2	701	32.5
Other underwear, including camisoles, teddies, undershirts, and union suits . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Panties . . . . .	. . . . .do	11,539	97.1	2,413	19.7	3,523	28.4	2,941	25.3	2,662	23.7
Robes and dressing gowns . . . . .	. . . . .do	64	6.2	8	1.0	24	3.0	13	1.1	19	1.1
Slips . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other garments:											
Bodysuits and bodyshirts	1,000 dozens	159	19.2	38	4.9	41	5.0	40	4.6	40	4.7
Jogging and warm-up suits . . . . .	. . . . .do	969	70.5	201	13.9	299	23.9	235	16.5	234	16.2
Overalls, coveralls, and jumpsuits . . . . .	. . . . .do	389	40.8	81	8.5	111	12.0	75	8.1	122	12.2
Playsuits, rompers, halters, etc . . . . .	. . . . .do	976	60.6	253	11.4	195	18.4	241	9.9	287	20.9
Ski apparel . . . . .	. . . . .do	-	-	-	-	-	-	-	-	-	-
Suits, including pant suits . . . . .	. . . . .do	82	11.4	22	2.4	13	1.6	17	1.7	30	5.7
Swimwear . . . . .	. . . . .do	782	76.9	258	17.2	114	15.9	127	12.6	283	31.2
Washable service apparel . . . . .	. . . . .do	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

Table 45. **QUANTITY OF PRODUCTION AND VALUE OF SHIPMENTS OF LITTLE GIRLS' APPAREL: 1992 AND 1991—Continued**

[Value in millions of dollars]

Product description	Unit of measure	Total		Fourth quarter		Third quarter		Second quarter		First quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1991											
Dresses	1,000 units	40,435	577.1	8,954	131.3	9,719	158.3	10,713	145.5	11,049	142.0
Coats, jackets, and vests:											
Coats and capes	1,000 units	326	17.1	58	4.4	92	6.6	89	3.8	87	2.3
Down and feather filled coats, jackets, and vests . . . . .	. . . . .do	-	-	-	-	-	-	-	-	-	-
Nontailored jackets . . . . .	. . . . .do	(D)	(D)	(D)	(D)	285	2.9	295	4.7	259	3.2
Raincoats . . . . .	. . . . .do	-	-	-	-	-	-	-	-	-	-
Separate vests . . . . .	. . . . .do	(D)	(D)	4	0.1	(D)	(D)	(D)	(D)	(D)	(D)
Tailored suit-type jackets . . . . .	. . . . .do	48	1.6	17	0.6	17	0.6	(D)	(D)	(D)	(D)
Tops:											
Woven blouses and shirts	1,000 dozens	1,638	162.7	433	36.0	443	55.9	419	39.2	343	31.6
Knit T-shirts and tank tops made for outerwear . . . . .	. . . . .do	3,289	142.4	761	33.2	638	30.3	860	37.9	1,030	41.0
Sweatshirts . . . . .	. . . . .do	571	30.7	197	10.7	209	11.9	86	4.3	79	3.8
Other knit blouses and shirts . . . . .	. . . . .do	3,616	257.1	836	63.0	1,194	84.0	858	56.2	728	53.9
Sweaters, including coat, cardigan, pullover, and vest sweaters . . . . .	. . . . .do	354	35.8	99	12.8	137	11.7	74	7.5	44	3.8
Bottoms:											
Shorts	1,000 units	16,856	91.4	3,141	15.5	4,074	23.0	3,314	14.9	6,327	38.0
Skirts and divided skirts . . . . .	. . . . .do	6,326	58.4	1,588	12.9	1,687	17.5	1,449	13.0	1,602	15.0
Slacks, pants, and jeans, including jean-cut casual slacks . . . . .	. . . . .do	31,644	245.1	6,645	46.4	10,013	72.1	9,049	71.9	5,937	54.7
Sweatpants	1,000 dozens	519	21.0	(D)	(D)	135	5.9	111	4.7	(D)	(D)
Underwear and nightwear:											
Brassieres, bra-lettes, and bandeaux	1,000 dozens	(D)	(D)	1	0.1	2	0.1	(D)	(D)	2	0.1
Girdles, corsets, and other foundation garments . . . . .	. . . . .do	-	-	-	-	-	-	-	-	-	-
Nightgowns, pajamas, and other nightwear . . . . .	. . . . .do	2,512	151.4	720	48.7	656	46.5	528	24.6	608	31.6
Other underwear, including camisoles, teddies, undershirts, and union suits . . . . .	. . . . .do	394	8.9	157	3.7	87	1.9	80	1.5	70	1.8
Panties . . . . .	. . . . .do	8,508	77.7	2,336	20.2	2,359	23.0	2,406	20.6	1,407	13.9
Robes and dressing gowns . . . . .	. . . . .do	58	6.0	12	1.4	27	3.1	11	0.9	8	0.6
Slips . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other garments:											
Bodysuits and bodyshirts	1,000 dozens	(D)	(D)	15	2.2	15	2.4	(D)	(D)	20	2.9
Jogging and warm-up suits . . . . .	. . . . .do	869	72.9	269	23.0	205	20.0	180	13.4	215	16.5
Overalls, coveralls, and jumpsuits . . . . .	. . . . .do	519	54.2	104	11.4	199	19.4	97	10.9	119	12.5
Playsuits, rompers, halters, etc . . . . .	. . . . .do	1,073	70.2	297	16.3	194	17.1	321	13.5	261	23.3
Ski apparel . . . . .	. . . . .do	-	-	-	-	-	-	-	-	-	-
Suits, including pant suits . . . . .	. . . . .do	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Swimwear . . . . .	. . . . .do	677	56.5	210	12.0	80	5.1	108	10.4	279	29.0
Washable service apparel . . . . .	. . . . .do	-	-	-	-	-	-	-	-	-	-

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

Table 46. QUANTITY OF PRODUCTION OF APPAREL BY TYPE OF FABRIC: 1992

Product description	Unit of measure	Total	Cotton	Manmade		Wool	Other	Not specified by kind (n.s.k.)
				Total	Wool blends only			
TOTAL								
Men's and boys' garments:								
Suits.....	1,000 units.....	10,032	228	5,824	3,273	3,574	225	381
Coats, jackets, and vests:								
Down and feather filled coats, jackets, and vests.....	1,000 units.....	(D)	(D)	383	(NA)	(D)	-	14
Dress and sport coats (tailored).....	.....do.....	13,422	568	8,863	3,053	2,990	(D)	(D)
Heavy nontailored coats and jackets.....	.....do.....	14,482	3,072	8,777	(NA)	862	111	1,660
Lightweight nontailored coats and jackets.....	.....do.....	17,445	1,771	13,878	(NA)	197	-	1,801
Overcoats and top coats.....	.....do.....	644	(D)	(D)	(NA)	242	119	17
Raincoats.....	.....do.....	2,525	436	1,372	(NA)	(NA)	-	717
Separate vests.....	.....do.....	(D)	(D)	(D)	(NA)	(D)	8	125
Work jackets.....	1,000 dozens.....	295	(D)	190	(NA)	(NA)	(D)	-
Tops:								
Woven dress and business shirts.....	1,000 dozens.....	8,874	4,153	2,627	(NA)	(NA)	(D)	(D)
Woven sport shirts.....	.....do.....	2,578	1,718	609	(NA)	(D)	-	(D)
Work shirts.....	.....do.....	3,447	859	2,766	(NA)	(NA)	(NA)	22
Knit T-shirts and tank tops made for outerwear.....	.....do.....	63,178	47,179	11,850	(NA)	-	(D)	(D)
Sweatshirts.....	.....do.....	21,388	9,255	11,736	(NA)	-	-	397
Other knit shirts.....	.....do.....	11,098	5,103	4,909	(NA)	-	-	1,084
Sweaters.....	.....do.....	1,948	866	812	(NA)	123	(D)	(D)
Bottoms:								
Dress and sport trousers.....	1,000 units.....	108,525	33,528	65,708	14,345	4,107	2,406	2,776
Jeans and jean-cut casual slacks.....	.....do.....	291,233	266,098	6,830	(NA)	(NA)	(D)	(D)
Shorts.....	.....do.....	104,188	74,571	25,861	(NA)	5	23	3,706
Sweatpants.....	1,000 dozens.....	7,611	1,126	6,393	(NA)	(NA)	(NA)	92
Workpants.....	.....do.....	2,750	192	2,484	(NA)	(NA)	-	74
Underwear and nightwear:								
Pajamas and nightwear.....	1,000 dozens.....	1,859	625	1,191	(NA)	(NA)	(D)	(D)
Robes.....	.....do.....	472	185	278	(NA)	(NA)	-	9
All other underwear, including thermal underwear, undershirts, knit undershorts, and woven boxer shorts.....	.....do.....	108,315	101,015	7,215	(NA)	(NA)	(D)	(D)
Other garments:								
Coveralls, overalls, and jumpsuits.....	1,000 dozens.....	1,313	583	710	(NA)	-	-	20
Jogging and warm-up suits.....	.....do.....	835	49	717	(NA)	(NA)	-	69
Playsuits.....	.....do.....	(D)	211	(D)	(NA)	-	8	12
Ski apparel.....	.....do.....	(D)	-	9	(NA)	(NA)	-	(D)
Swimwear.....	.....do.....	463	206	239	(NA)	(NA)	-	18
Team sports uniforms.....	.....do.....	(D)	(D)	892	(NA)	-	-	539
Washable service apparel.....	.....do.....	1,851	109	1,208	(NA)	(NA)	-	334
Women's and girls' garments:								
Dresses.....	1,000 units.....	157,898	34,371	101,729	(NA)	1,555	5,449	14,794
Coats, jackets, and vests:								
Coats and capes.....	1,000 units.....	7,166	800	2,507	1,428	3,299	18	542
Down and feather filled coats, jackets, and vests.....	.....do.....	31	-	12	(NA)	-	6	13
Heavy nontailored coats and jackets.....	.....do.....	10,317	1,666	5,380	(NA)	440	285	2,546
Raincoats.....	.....do.....	1,131	(D)	699	(NA)	(NA)	(D)	(D)
Separate vests.....	.....do.....	871	96	373	(NA)	-	-	202
Tailored suit-type jackets.....	.....do.....	27,148	1,973	19,141	3,399	4,590	457	987
Tops:								
Woven blouses and shirts.....	1,000 dozens.....	15,950	5,210	9,339	(NA)	28	337	1,036
Knit T-shirts and tank tops made for outerwear.....	.....do.....	9,914	4,798	3,689	(NA)	(NA)	136	1,291
Sweatshirts.....	.....do.....	3,557	319	3,144	(NA)	(NA)	-	94
Other knit blouses and shirts.....	.....do.....	8,523	2,996	4,355	(NA)	-	338	634
Sweaters, including coat, cardigan, pullover and vest sweaters.....	.....do.....	3,212	1,439	1,260	(NA)	85	35	393
Bottoms:								
Shorts.....	1,000 units.....	79,441	41,836	29,767	(NA)	(NA)	438	7,400
Skirts and divided skirts.....	.....do.....	91,701	29,133	48,497	3,450	5,273	2,358	6,440
Slacks, pants, and jeans, including jean-cut casual slacks.....	.....do.....	319,578	173,038	122,781	6,478	1,912	2,498	19,349
Sweatpants.....	1,000 dozens.....	2,497	(D)	2,360	(NA)	(NA)	-	(D)
Underwear and nightwear:								
Brassieres, bra-lettes, and bandeaux.....	1,000 dozens.....	19,844	787	18,831	(NA)	(NA)	(D)	(D)
Girdles, corsets, and other foundation garments.....	.....do.....	6,446	(D)	5,062	(NA)	(NA)	-	(D)
Nightgowns, pajamas, and other nightwear.....	.....do.....	8,790	1,911	6,428	(NA)	(NA)	116	335
Panties.....	.....do.....	57,473	41,908	14,799	(NA)	(NA)	-	766
Robes and dressing gowns.....	.....do.....	1,472	489	820	(NA)	(NA)	18	145
All other underwear, including slips, camisoles, teddies, undershirts, and union shirts.....	.....do.....	5,336	1,250	3,678	(NA)	(NA)	-	408
Other garments:								
Body suits and body shirts.....	1,000 dozens.....	1,345	(D)	544	(NA)	(NA)	-	(D)
Jogging and warm-up suits.....	.....do.....	1,243	104	1,044	(NA)	(NA)	(D)	(D)
Overalls, coveralls, and jumpsuits.....	.....do.....	671	356	171	(NA)	-	-	144
Playsuits, rompers, halters, etc.....	.....do.....	1,333	233	913	(NA)	-	(D)	(D)
Ski apparel.....	.....do.....	89	-	19	(NA)	(NA)	-	70
Suits, including pant suits.....	.....do.....	786	22	425	99	213	25	101
Swimwear.....	.....do.....	3,871	129	3,626	(NA)	(NA)	-	116
Washable service apparel.....	.....do.....	2,310	269	1,557	(NA)	(NA)	-	484
Infants' apparel.....	.....do.....	14,168	8,609	4,292	(NA)	(NA)	455	812

See footnotes at end of table.

Table 46. QUANTITY OF PRODUCTION OF APPAREL BY TYPE OF FABRIC: 1992—Continued

Product description	Unit of measure	Total	Cotton	Manmade		Wool	Other	Not specified by kind (n.s.k.)
				Total	Wool blends only			
FOURTH QUARTER								
Men's and boys' garments:								
Suits.....	1,000 units.....	2,506	77	1,296	762	989	49	95
Coats, jackets, and vests:								
Down and feather filled coats, jackets, and vests.....	1,000 units.....	(D)	(D)	104	(NA)	(D)	-	4
Dress and sport coats (tailored).....	.....do.....	3,074	136	1,985	772	729	138	86
Heavy nontailored coats and jackets.....	.....do.....	4,125	835	2,545	(NA)	250	(D)	(D)
Lightweight nontailored coats and jackets.....	.....do.....	4,552	401	3,627	(NA)	54	-	470
Overcoats and top coats.....	.....do.....	166	(D)	(D)	(NA)	(D)	46	6
Raincoats.....	.....do.....	(D)	(D)	332	(NA)	(NA)	-	(D)
Separate vests.....	.....do.....	(D)	(D)	(D)	(NA)	(D)	-	30
Work jackets.....	1,000 dozens.....	67	(D)	38	(NA)	(NA)	(D)	-
Tops:								
Woven dress and business shirts.....	1,000 dozens.....	1,671	1,040	608	(NA)	(NA)	(D)	(D)
Woven sport shirts.....	.....do.....	687	470	151	(NA)	(D)	-	(D)
Work shirts.....	.....do.....	756	166	586	(NA)	(NA)	(NA)	4
Knit T-shirts and tank tops made for outerwear.....	.....do.....	15,253	11,590	2,651	(NA)	-	(D)	(D)
Sweatshirts.....	.....do.....	5,617	2,401	3,116	(NA)	-	-	100
Other knit shirts.....	.....do.....	2,631	1,198	1,169	(NA)	-	-	264
Sweaters.....	.....do.....	481	253	170	(NA)	25	-	33
Bottoms:								
Dress and sport trousers.....	1,000 units.....	23,837	7,967	13,680	3,448	1,018	(D)	(D)
Jeans and jean-cut casual slacks.....	.....do.....	77,539	71,020	1,454	(NA)	(NA)	(D)	(D)
Shorts.....	.....do.....	21,411	15,238	5,359	(NA)	(D)	(D)	(D)
Sweatpants.....	1,000 dozens.....	1,919	305	1,590	(NA)	(NA)	(NA)	24
Workpants.....	.....do.....	591	45	529	(NA)	(NA)	-	17
Underwear and nightwear:								
Pajamas and nightwear.....	1,000 dozens.....	461	192	260	(NA)	(NA)	(D)	(D)
Robes.....	.....do.....	161	77	81	(NA)	(NA)	-	3
All other underwear, including thermal underwear, undershirts, knit undershorts, and woven boxer shorts.....	.....do.....	27,523	25,337	2,162	(NA)	(NA)	(D)	(D)
Other garments:								
Coveralls, overalls, and jumpsuits.....	1,000 dozens.....	306	139	162	(NA)	-	-	5
Jogging and warm-up suits.....	.....do.....	236	(D)	215	(NA)	(NA)	-	(D)
Playsuits.....	.....do.....	(D)	(D)	(D)	(NA)	-	(D)	3
Ski apparel.....	.....do.....	(D)	-	3	(NA)	(NA)	-	(D)
Swimwear.....	.....do.....	78	36	38	(NA)	(NA)	-	4
Team sports uniforms.....	.....do.....	(D)	(D)	251	(NA)	-	-	147
Washable service apparel.....	.....do.....	393	21	286	(NA)	(NA)	(D)	(D)
Women's and girls' garments:								
Dresses.....	1,000 units.....	34,440	7,087	22,356	(NA)	448	1,334	3,215
Coats, jackets, and vests:								
Coats and capes.....	1,000 units.....	(D)	191	781	487	836	(D)	146
Down and feather filled coats, jackets, and vests.....	.....do.....	(D)	-	4	(NA)	-	(D)	3
Heavy nontailored coats and jackets.....	.....do.....	2,186	334	1,182	(NA)	149	62	459
Raincoats.....	.....do.....	(D)	(D)	(D)	(NA)	(NA)	(D)	(D)
Separate vests.....	.....do.....	(D)	(D)	94	(NA)	-	-	44
Tailored suit-type jackets.....	.....do.....	(D)	411	5,158	827	839	143	(D)
Tops:								
Woven blouses and shirts.....	1,000 dozens.....	3,728	1,265	2,143	(NA)	8	84	228
Knit T-shirts and tank tops made for outerwear.....	.....do.....	2,317	1,243	721	(NA)	(NA)	(D)	(D)
Sweatshirts.....	.....do.....	901	58	(D)	(NA)	(NA)	-	(D)
Other knit blouses and shirts.....	.....do.....	1,806	647	875	(NA)	-	(D)	(D)
Sweaters, including coat, cardigan, pullover and vest sweaters.....	.....do.....	797	449	236	(NA)	22	(D)	(D)
Bottoms:								
Shorts.....	1,000 units.....	14,041	6,806	5,450	(NA)	(NA)	129	1,656
Skirts and divided skirts.....	.....do.....	20,309	6,232	11,031	875	1,032	608	1,406
Slacks, pants, and jeans, including jean-cut casual slacks.....	.....do.....	73,925	40,755	27,610	1,533	431	773	4,356
Sweatpants.....	1,000 dozens.....	679	(D)	652	(NA)	(NA)	-	(D)
Underwear and nightwear:								
Brassieres, bra-lettes, and bandeaux.....	1,000 dozens.....	4,833	166	4,609	(NA)	(NA)	(D)	(D)
Girdles, corsets, and other foundation garments.....	.....do.....	1,435	(D)	1,134	(NA)	(NA)	-	(D)
Nightgowns, pajamas, and other nightwear.....	.....do.....	2,176	485	1,574	(NA)	(NA)	(D)	(D)
Panties.....	.....do.....	13,942	10,310	3,435	(NA)	(NA)	-	197
Robes and dressing gowns.....	.....do.....	407	140	230	(NA)	(NA)	(D)	(D)
All other underwear, including slips, camisoles, teddies, undershirts, and union shirts.....	.....do.....	1,294	332	856	(NA)	(NA)	-	106
Other garments:								
Body suits and bodyshirts.....	1,000 dozens.....	356	(D)	150	(NA)	(NA)	-	(D)
Jogging and warm-up suits.....	.....do.....	255	19	215	(NA)	(NA)	(D)	(D)
Overalls, coveralls, and jumpsuits.....	.....do.....	109	50	33	(NA)	-	-	26
Playsuits, rompers, halters, etc.....	.....do.....	319	46	233	(NA)	-	(D)	(D)
Ski apparel.....	.....do.....	(D)	-	(D)	(NA)	(NA)	-	18
Suits, including pant suits.....	.....do.....	181	2	88	19	57	(D)	(D)
Swimwear.....	.....do.....	1,039	(D)	940	(NA)	(NA)	-	(D)
Washable service apparel.....	.....do.....	532	63	356	(NA)	(NA)	-	113
Infants' apparel.....	.....do.....	3,412	1,934	1,148	(NA)	(NA)	115	211

See footnotes at end of table.

Table 46. QUANTITY OF PRODUCTION OF APPAREL BY TYPE OF FABRIC: 1992—Continued

Product description	Unit of measure	Total	Cotton	Manmade		Wool	Other	Not specified by kind (n.s.k.)
				Total	Wool blends only			
THIRD QUARTER								
Men's and boys' garments:								
Suits	1,000 units	2,420	34	1,368	776	874	44	100
Coats, jackets, and vests:								
Down and feather filled coats, jackets, and vests	1,000 units	(D)	(D)	134	(NA)	(D)	-	4
Dress and sport coats (tailored) . . . . .	. . . . .do	3,587	133	2,331	782	868	151	104
Heavy nontailored coats and jackets . . . . .	. . . . .do	4,000	1,032	2,274	(NA)	220	(D)	(D)
Lightweight nontailored coats and jackets . . . . .	. . . . .do	4,185	658	3,071	(NA)	56	-	400
Overcoats and top coats . . . . .	. . . . .do	188	(D)	(D)	(NA)	(D)	31	5
Raincoats . . . . .	. . . . .do	(D)	(D)	364	(NA)	(NA)	-	195
Separate vests . . . . .	. . . . .do	(D)	(D)	(D)	(NA)	(D)	(D)	(D)
Work jackets	1,000 dozens	83	(D)	(D)	(NA)	(NA)	-	-
Tops:								
Woven dress and business shirts	1,000 dozens	1,652	981	649	(NA)	(NA)	-	22
Woven sport shirts . . . . .	. . . . .do	625	417	147	(NA)	(D)	-	(D)
Work shirts . . . . .	. . . . .do	951	197	748	(NA)	(NA)	(NA)	6
Knit T-shirts and tank tops made for outerwear . . . . .	. . . . .do	15,403	11,732	2,651	(NA)	-	(D)	(D)
Sweatshirts . . . . .	. . . . .do	6,030	2,735	3,188	(NA)	-	-	109
Other knit shirts . . . . .	. . . . .do	2,658	1,125	1,296	(NA)	-	-	237
Sweaters . . . . .	. . . . .do	585	239	267	(NA)	39	(D)	(D)
Bottoms:								
Dress and sport trousers	1,000 units	27,691	9,305	16,162	3,798	1,043	471	710
Jeans and jean-cut casual slacks . . . . .	. . . . .do	78,947	72,413	1,595	(NA)	(NA)	-	4,939
Shorts . . . . .	. . . . .do	15,946	9,953	5,361	(NA)	-	2	630
Sweatpants	1,000 dozens	2,199	329	1,842	(NA)	(NA)	(NA)	28
Workpants . . . . .	. . . . .do	698	47	633	(NA)	(NA)	-	18
Underwear and nightwear:								
Pajamas and nightwear	1,000 dozens	472	152	307	(NA)	(NA)	(D)	(D)
Robes . . . . .	. . . . .do	177	59	115	(NA)	(NA)	-	3
All other underwear, including thermal underwear, undershirts, knit undershorts, and woven boxer shorts . . . . .	. . . . .do	27,709	25,635	2,051	(NA)	(NA)	(D)	(D)
Other garments:								
Coveralls, overalls, and jumpsuits	1,000 dozens	345	160	180	(NA)	-	-	5
Jogging and warm-up suits . . . . .	. . . . .do	299	3	276	(NA)	(NA)	-	20
Playsuits . . . . .	. . . . .do	(D)	34	(D)	(NA)	-	(D)	3
Ski apparel . . . . .	. . . . .do	(D)	-	2	(NA)	(NA)	-	(D)
Swimwear . . . . .	. . . . .do	67	26	37	(NA)	(NA)	-	4
Team sports uniforms . . . . .	. . . . .do	(D)	(D)	205	(NA)	-	-	122
Washable service apparel . . . . .	. . . . .do	429	20	321	(NA)	(NA)	-	88
Women's and girls' garments:								
Dresses	1,000 units	35,753	7,141	23,517	(NA)	486	1,159	3,450
Coats, jackets, and vests:								
Coats and capes	1,000 units	(D)	298	773	459	1,197	(D)	(D)
Down and feather filled coats, jackets, and vests . . . . .	. . . . .do	10	-	5	(NA)	-	(D)	(D)
Heavy nontailored coats and jackets . . . . .	. . . . .do	3,278	497	1,844	(NA)	148	86	703
Raincoats . . . . .	. . . . .do	(D)	(D)	(D)	(NA)	(NA)	(D)	(D)
Separate vests . . . . .	. . . . .do	(D)	37	175	(NA)	-	-	(D)
Tailored suit-type jackets . . . . .	. . . . .do	7,129	508	4,469	966	1,721	180	251
Tops:								
Woven blouses and shirts	1,000 dozens	3,709	1,339	2,014	(NA)	10	93	253
Knit T-shirts and tank tops made for outerwear . . . . .	. . . . .do	2,003	881	812	(NA)	(NA)	(D)	(D)
Sweatshirts . . . . .	. . . . .do	1,462	120	1,305	(NA)	(NA)	-	37
Other knit blouses and shirts . . . . .	. . . . .do	2,415	830	1,282	(NA)	-	(D)	(D)
Sweaters, including coat, cardigan, pullover and vest sweaters . . . . .	. . . . .do	912	397	376	(NA)	28	(D)	(D)
Bottoms:								
Shorts	1,000 units	12,823	5,239	5,534	(NA)	(NA)	107	1,943
Skirts and divided skirts . . . . .	. . . . .do	22,639	7,122	11,305	1,112	2,071	538	1,603
Slacks, pants, and jeans, including jean-cut casual slacks . . . . .	. . . . .do	87,811	46,272	34,812	2,204	884	637	5,206
Sweatpants	1,000 dozens	902	(D)	843	(NA)	(NA)	-	(D)
Underwear and nightwear:								
Brassieres, bra-lettes, and bandeaux	1,000 dozens	5,408	197	5,152	(NA)	(NA)	(D)	(D)
Girdles, corsets, and other foundation garments . . . . .	. . . . .do	1,634	(D)	1,290	(NA)	(NA)	-	(D)
Nightgowns, pajamas, and other nightwear . . . . .	. . . . .do	2,225	481	1,619	(NA)	(NA)	37	85
Panties . . . . .	. . . . .do	15,778	11,542	4,032	(NA)	(NA)	-	204
Robes and dressing gowns . . . . .	. . . . .do	400	114	249	(NA)	(NA)	(D)	(D)
All other underwear, including slips, camisoles, teddies, undershirts, and union shirts . . . . .	. . . . .do	1,503	382	1,021	(NA)	(NA)	-	100
Other garments:								
Bodysuits and bodyshirts	1,000 dozens	357	(D)	155	(NA)	(NA)	-	(D)
Jogging and warm-up suits . . . . .	. . . . .do	357	13	320	(NA)	(NA)	(D)	(D)
Overalls, coveralls, and jumpsuits . . . . .	. . . . .do	146	65	46	(NA)	-	-	35
Playsuits, rompers, halters, etc. . . . .	. . . . .do	300	49	206	(NA)	-	(D)	(D)
Ski apparel . . . . .	. . . . .do	27	-	6	(NA)	(NA)	-	21
Suits, including pant suits . . . . .	. . . . .do	170	2	83	21	54	6	25
Swimwear . . . . .	. . . . .do	492	(D)	420	(NA)	(NA)	-	(D)
Washable service apparel . . . . .	. . . . .do	583	66	395	(NA)	(NA)	-	122
Infants' apparel . . . . .	. . . . .do	3,757	2,259	1,194	(NA)	(NA)	89	215

See footnotes at end of table.

Table 46. QUANTITY OF PRODUCTION OF APPAREL BY TYPE OF FABRIC: 1992—Continued

Product description	Unit of measure	Total	Cotton	Manmade		Wool	Other	Not specified by kind (n.s.k.)
				Total	Wool blends only			
SECOND QUARTER								
Men's and boys' garments:								
Suits	1,000 units	2,428	36	1,445	799	793	63	91
Coats, jackets, and vests:								
Down and feather filled coats, jackets, and vests	1,000 units	(D)	(D)	60	(NA)	(D)	-	2
Dress and sport coats (tailored)	do	3,188	92	2,178	719	679	151	88
Heavy nontailored coats and jackets	do	3,280	737	1,941	(NA)	171	(D)	(D)
Lightweight nontailored coats and jackets	do	3,958	406	3,092	(NA)	36	-	424
Overcoats and top coats	do	157	(D)	(D)	(NA)	77	(D)	4
Raincoats	do	(D)	122	328	(NA)	(NA)	-	(D)
Separate vests	do	(D)	-	(D)	(NA)	(D)	(D)	(D)
Work jackets	1,000 dozens	64	(D)	(D)	(NA)	(NA)	1	-
Tops:								
Woven dress and business shirts	1,000 dozens	1,688	1,025	639	(NA)	(NA)	(D)	(D)
Woven sport shirts	do	586	376	150	(NA)	(D)	-	(D)
Work shirts	do	918	150	761	(NA)	(NA)	(NA)	7
Knit T-shirts and tank tops made for outerwear	do	16,145	11,775	3,325	(NA)	-	(D)	(D)
Sweatshirts	do	4,651	1,786	2,776	(NA)	-	-	89
Other knit shirts	do	2,959	1,432	1,233	(NA)	-	-	294
Sweaters	do	523	241	222	(NA)	23	(D)	(D)
Bottoms:								
Dress and sport trousers	1,000 units	27,506	8,413	16,954	3,702	869	566	704
Jeans and jean-cut casual slacks	do	69,400	63,437	1,663	(NA)	(NA)	-	4,300
Shorts	do	29,360	22,638	5,699	(NA)	(D)	-	(D)
Sweatpants	1,000 dozens	1,817	257	1,539	(NA)	(NA)	(NA)	21
Workpants	do	728	51	657	(NA)	(NA)	-	20
Underwear and nightwear:								
Pajamas and nightwear	1,000 dozens	490	138	342	(NA)	(NA)	(D)	(D)
Robes	do	82	25	55	(NA)	(NA)	-	2
All other underwear, including thermal underwear, undershirts, knit undershorts, and woven boxer shorts.	do	26,219	24,722	1,476	(NA)	(NA)	-	21
Other garments:								
Coveralls, overalls, and jumpsuits	1,000 dozens	305	126	174	(NA)	-	-	5
Jogging and warm-up suits	do	156	3	135	(NA)	(NA)	-	18
Playsuits	do	(D)	42	(D)	(NA)	-	2	3
Ski apparel	do	(D)	-	2	(NA)	(NA)	-	(D)
Swimwear	do	99	43	52	(NA)	(NA)	-	4
Team sports uniforms	do	(D)	(D)	186	(NA)	-	-	122
Washable service apparel	do	384	22	284	(NA)	(NA)	-	78
Women's and girls' garments:								
Dresses	1,000 units	42,106	9,369	27,036	(NA)	403	1,362	3,936
Coats, jackets, and vests:								
Coats and capes	1,000 units	1,691	150	525	291	887	4	125
Down and feather filled coats, jackets, and vests	do	(D)	-	(D)	(NA)	-	(D)	3
Heavy nontailored coats and jackets	do	2,553	456	1,303	(NA)	82	69	643
Raincoats	do	(D)	(D)	(D)	(NA)	(NA)	-	(D)
Separate vests	do	126	(D)	77	(NA)	-	-	(D)
Tailored suit-type jackets	do	(D)	498	4,311	745	1,292	67	(D)
Tops:								
Woven blouses and shirts	1,000 dozens	4,078	1,263	2,460	(NA)	5	76	274
Knit T-shirts and tank tops made for outerwear	do	2,588	1,262	975	(NA)	(NA)	32	319
Sweatshirts	do	585	94	472	(NA)	(NA)	-	19
Other knit blouses and shirts	do	2,184	742	1,149	(NA)	-	(D)	(D)
Sweaters, including coat, cardigan, pullover and vest sweaters	do	878	347	388	(NA)	21	14	108
Bottoms:								
Shorts	1,000 units	24,522	13,001	9,547	(NA)	(NA)	93	1,881
Skirts and divided skirts	do	23,380	7,095	12,954	950	1,195	527	1,609
Slacks, pants, and jeans, including jean-cut casual slacks	do	83,240	46,172	31,242	1,713	376	538	4,912
Sweatpants	1,000 dozens	419	(D)	391	(NA)	(NA)	-	(D)
Underwear and nightwear:								
Brassieres, bra-lettes, and bandeaux	1,000 dozens	4,821	202	4,565	(NA)	(NA)	-	54
Girdles, corsets, and other foundation garments	do	1,603	(D)	1,253	(NA)	(NA)	-	(D)
Nightgowns, pajamas, and other nightwear	do	2,143	464	1,562	(NA)	(NA)	37	80
Panties	do	14,761	10,521	4,045	(NA)	(NA)	-	195
Robes and dressing gowns	do	282	106	141	(NA)	(NA)	(D)	(D)
All other underwear, including slips, camisoles, teddies, undershirts, and union shirts.	do	1,234	244	893	(NA)	(NA)	-	97
Other garments:								
Bodysuits and bodyshirts	1,000 dozens	308	(D)	120	(NA)	(NA)	-	(D)
Jogging and warm-up suits	do	300	23	254	(NA)	(NA)	(D)	(D)
Overalls, coveralls, and jumpsuits	do	138	63	36	(NA)	-	-	39
Playsuits, rompers, halters, etc.	do	340	55	234	(NA)	-	(D)	(D)
Ski apparel	do	(D)	-	(D)	(NA)	(NA)	-	18
Suits, including pant suits	do	233	12	156	23	31	8	26
Swimwear	do	1,029	8	995	(NA)	(NA)	-	26
Washable service apparel	do	606	72	408	(NA)	(NA)	-	126
Infants' apparel	do	3,132	1,953	905	(NA)	(NA)	103	171

See footnotes at end of table.

Table 46. QUANTITY OF PRODUCTION OF APPAREL BY TYPE OF FABRIC: 1992—Continued

Product description	Unit of measure	Total	Cotton	Manmade		Wool	Other	Not specified by kind (n.s.k.)
				Total	Wool blends only			
FIRST QUARTER								
Men's and boys' garments:								
Suits.....	1,000 units.....	2,678	81	1,515	936	918	69	95
Coats, jackets, and vests:								
Down and feather filled coats, jackets, and vests.....	1,000 units.....	(D)	(D)	65	(NA)	(D)	-	4
Dress and sport coats (tailored).....	.....do.....	3,573	207	2,369	780	714	180	103
Heavy nontailored coats and jackets.....	.....do.....	3,077	468	2,017	(NA)	221	(D)	(D)
Lightweight nontailored coats and jackets.....	.....do.....	4,750	306	3,886	(NA)	51	-	507
Overcoats and top coats.....	.....do.....	135	(D)	(D)	(NA)	30	(D)	2
Raincoats.....	.....do.....	612	92	348	(NA)	(NA)	-	172
Separate vests.....	.....do.....	(D)	(D)	(D)	(NA)	(D)	(D)	31
Work jackets.....	1,000 dozens.....	81	(D)	(D)	(NA)	(NA)	(D)	-
Tops:								
Woven dress and business shirts.....	1,000 dozens.....	1,863	1,107	731	(NA)	(NA)	(D)	(D)
Woven sport shirts.....	.....do.....	678	453	161	(NA)	(D)	-	(D)
Work shirts.....	.....do.....	822	146	671	(NA)	(NA)	(NA)	5
Knit T-shirts and tank tops made for outerwear.....	.....do.....	16,375	12,082	3,223	(NA)	-	(D)	(D)
Sweatshirts.....	.....do.....	5,090	2,333	2,658	(NA)	-	-	99
Other knit shirts.....	.....do.....	2,848	1,348	1,211	(NA)	-	-	289
Sweaters.....	.....do.....	359	133	153	(NA)	36	(D)	(D)
Bottoms:								
Dress and sport trousers.....	1,000 units.....	29,491	7,843	18,912	3,397	1,177	(D)	(D)
Jeans and jean-cut casual slacks.....	.....do.....	65,347	59,228	2,118	(NA)	(NA)	(D)	(D)
Shorts.....	.....do.....	37,449	26,742	9,442	(NA)	(D)	(D)	(D)
Sweatpants.....	1,000 dozens.....	1,676	235	1,422	(NA)	(NA)	(NA)	19
Workpants.....	.....do.....	733	49	665	(NA)	(NA)	-	19
Underwear and nightwear:								
Pajamas and nightwear.....	1,000 dozens.....	436	143	282	(NA)	(NA)	(D)	(D)
Robes.....	.....do.....	52	24	27	(NA)	(NA)	-	1
All other underwear, including thermal underwear, undershirts, knit undershorts, and woven boxer shorts.....	.....do.....	26,864	25,321	1,526	(NA)	(NA)	-	17
Other garments:								
Coveralls, overalls, and jumpsuits.....	1,000 dozens.....	357	158	194	(NA)	-	-	5
Jogging and warm-up suits.....	.....do.....	144	(D)	91	(NA)	(NA)	-	(D)
Playsuits.....	.....do.....	(D)	(D)	(D)	(NA)	-	(D)	3
Ski apparel.....	.....do.....	(D)	-	2	(NA)	(NA)	-	(D)
Swimwear.....	.....do.....	219	101	112	(NA)	(NA)	-	6
Team sports uniforms.....	.....do.....	(D)	(D)	250	(NA)	-	-	148
Washable service apparel.....	.....do.....	445	46	317	(NA)	(NA)	-	82
Women's and girls' garments:								
Dresses.....	1,000 units.....	45,599	10,774	28,820	(NA)	218	1,594	4,193
Coats, jackets, and vests:								
Coats and capes.....	1,000 units.....	1,070	161	428	191	379	(D)	(D)
Down and feather filled coats, jackets, and vests.....	.....do.....	7	-	(D)	(NA)	-	(D)	(D)
Heavy nontailored coats and jackets.....	.....do.....	2,300	379	1,051	(NA)	61	68	741
Raincoats.....	.....do.....	232	(D)	150	(NA)	(NA)	(D)	2
Separate vests.....	.....do.....	67	(D)	27	(NA)	-	-	(D)
Tailored suit-type jackets.....	.....do.....	6,826	556	5,203	861	738	67	262
Tops:								
Woven blouses and shirts.....	1,000 dozens.....	4,435	1,343	2,722	(NA)	5	84	281
Knit T-shirts and tank tops made for outerwear.....	.....do.....	3,006	1,412	1,181	(NA)	(NA)	43	370
Sweatshirts.....	.....do.....	609	47	(D)	(NA)	(NA)	-	(D)
Other knit blouses and shirts.....	.....do.....	2,118	777	1,049	(NA)	-	93	199
Sweaters, including coat, cardigan, pullover and vest sweaters.....	.....do.....	625	246	260	(NA)	14	9	96
Bottoms:								
Shorts.....	1,000 units.....	28,055	16,790	9,236	(NA)	(NA)	109	1,920
Skirts and divided skirts.....	.....do.....	25,373	8,684	13,207	513	975	685	1,822
Slacks, pants, and jeans, including jean-cut casual slacks.....	.....do.....	74,602	39,839	29,117	1,028	221	550	4,875
Sweatpants.....	1,000 dozens.....	497	(D)	474	(NA)	(NA)	-	(D)
Underwear and nightwear:								
Brassieres, bra-lettes, and bandeaux.....	1,000 dozens.....	4,782	222	4,505	(NA)	(NA)	-	55
Girdles, corsets, and other foundation garments.....	.....do.....	1,774	(D)	1,385	(NA)	(NA)	-	(D)
Nightgowns, pajamas, and other nightwear.....	.....do.....	2,246	481	1,673	(NA)	(NA)	(D)	(D)
Panties.....	.....do.....	12,992	9,535	3,287	(NA)	(NA)	-	170
Robes and dressing gowns.....	.....do.....	383	129	200	(NA)	(NA)	(D)	(D)
All other underwear, including slips, camisoles, teddies, undershirts, and union shirts.....	.....do.....	1,305	292	908	(NA)	(NA)	-	105
Other garments:								
Bodysuits and bodyshirts.....	1,000 dozens.....	324	(D)	119	(NA)	(NA)	-	(D)
Jogging and warm-up suits.....	.....do.....	331	49	255	(NA)	(NA)	(D)	(D)
Overalls, coveralls, and jumpsuits.....	.....do.....	278	178	56	(NA)	-	-	44
Playsuits, rompers, halters, etc.....	.....do.....	374	83	240	(NA)	-	(D)	(D)
Ski apparel.....	.....do.....	18	-	5	(NA)	(NA)	-	13
Suits, including pant suits.....	.....do.....	202	6	98	36	71	(D)	(D)
Swimwear.....	.....do.....	1,311	7	1,271	(NA)	(NA)	-	33
Washable service apparel.....	.....do.....	589	68	398	(NA)	(NA)	-	123
Infants' apparel.....	.....do.....	3,867	2,463	1,045	(NA)	(NA)	148	211

- Represents zero.

(D) Data withheld to avoid disclosing figures for individual companies.

(NA) Not available.

Table 47. QUANTITY OF PRODUCTION OF APPAREL BY TYPE OF FABRIC: 1991

Product description	Unit of measure	Total	Cotton	Manmade		Wool	Other	Not specified by kind (n.s.k.)
				Total	Wool blends only			
TOTAL								
Men's and boys' garments:								
Suits	1,000 units	9,506	240	5,163	3,049	3,557	261	285
Coats, jackets, and vests:								
Down and feather filled coats, jackets, and vests	1,000 units	401	(D)	324	(NA)	(D)	(D)	28
Dress and sport coats (tailored)	do	13,683	638	8,807	3,040	3,091	(D)	(D)
Heavy nontailored coats and jackets	do	12,819	2,295	7,836	(NA)	1,096	(D)	(D)
Lightweight nontailored coats and jackets	do	16,374	1,303	13,023	(NA)	(D)	69	(D)
Overcoats and top coats	do	724	(D)	(NA)	(NA)	239	(D)	61
Raincoats	do	(D)	(D)	1,584	(NA)	(NA)	(D)	936
Separate vests	do	822	18	(D)	(NA)	28	(D)	111
Work jackets	1,000 dozens	305	(D)	(D)	(NA)	(NA)	(D)	1
Tops:								
Woven dress and business shirts	1,000 dozens	6,718	4,010	2,544	(NA)	(NA)	11	153
Woven sport shirts	do	2,224	1,458	545	(NA)	(D)	-	(D)
Work shirts	do	3,362	736	2,611	(NA)	(NA)	(NA)	15
Knit T-shirts and tank tops made for outerwear	do	48,718	35,865	10,222	(NA)	-	14	2,617
Sweatshirts	do	20,125	8,934	10,813	(NA)	-	(D)	(D)
Other knit shirts	do	10,721	5,376	4,210	(NA)	-	-	1,135
Sweaters	do	1,798	700	674	(NA)	(D)	(D)	83
Bottoms:								
Dress and sport trousers	1,000 units	114,839	33,280	72,606	13,123	4,078	(D)	(D)
Jeans and jean-cut casual slacks	do	256,541	239,680	7,075	(NA)	(NA)	(D)	(D)
Shorts	do	80,303	49,742	28,575	(NA)	63	59	1,864
Sweatpants	1,000 dozens	7,358	1,868	5,387	(NA)	(NA)	(NA)	103
Workpants	do	3,359	233	3,058	(NA)	(NA)	-	68
Underwear and nightwear:								
Pajamas and nightwear	1,000 dozens	1,677	462	1,176	(NA)	(NA)	(D)	(D)
Robes	do	415	146	260	(NA)	(NA)	-	9
All other underwear, including thermal underwear, undershirts, knit undershorts, and woven boxer shorts	do	96,796	90,311	(D)	(NA)	(NA)	-	(D)
Other garments:								
Coveralls, overalls, and jumpsuits	1,000 dozens	1,380	581	760	(NA)	-	-	39
Jogging and warm-up suits	do	665	49	537	(NA)	(NA)	-	79
Playsuits	do	(D)	(D)	67	(NA)	-	(D)	13
Ski apparel	do	325	-	8	(NA)	(NA)	-	317
Swimwear	do	515	290	206	(NA)	(NA)	-	19
Team sports uniforms	do	(D)	(D)	788	(NA)	-	-	(D)
Washable service apparel	do	1,869	341	1,159	(NA)	(NA)	-	369
Women's and girls' garments:								
Dresses	1,000 units	161,320	38,903	102,848	(NA)	2,057	5,979	11,533
Coats, jackets, and vests:								
Coats and capes	1,000 units	8,031	654	(D)	1,836	3,781	(D)	463
Down and feather filled coats, jackets, and vests	do	(D)	10	21	(NA)	-	(D)	-
Heavy nontailored coats and jackets	do	8,665	(D)	(D)	(NA)	338	401	1,664
Raincoats	do	1,582	(D)	929	(NA)	(NA)	(D)	(D)
Separate vests	do	287	(D)	(NA)	(NA)	-	-	160
Tailored suit-type jackets	do	24,863	2,328	17,774	4,287	3,545	819	397
Tops:								
Woven blouses and shirts	1,000 dozens	14,981	5,020	8,863	(NA)	37	402	659
Knit T-shirts and tank tops made for outerwear	do	9,964	5,186	3,916	(NA)	(NA)	(D)	(D)
Sweatshirts	do	4,164	337	3,700	(NA)	(NA)	(D)	(D)
Other knit blouses and shirts	do	8,785	3,671	4,184	(NA)	(D)	(D)	676
Sweaters, including coat, cardigan, pullover and vest sweaters	do	3,045	1,207	1,334	(NA)	81	(D)	(D)
Bottoms:								
Shorts	1,000 units	62,456	28,787	29,092	(NA)	(NA)	301	4,276
Skirts and divided skirts	do	93,093	19,500	55,846	4,113	7,671	2,351	7,725
Slacks, pants, and jeans, including jean-cut casual slacks	do	280,778	152,350	108,838	7,313	(D)	2,434	(D)
Sweatpants	1,000 dozens	2,878	(D)	2,752	(NA)	(NA)	(D)	31
Underwear and nightwear:								
Brassieres, bra-lettes, and bandeaux	1,000 dozens	17,990	821	16,941	(NA)	(NA)	-	228
Girdles, corsets, and other foundation garments	do	5,959	(D)	4,699	(NA)	(NA)	-	(D)
Nightgowns, pajamas, and other nightwear	do	9,074	1,304	7,402	(NA)	(NA)	(D)	(D)
Panties	do	55,573	38,144	16,701	(NA)	(NA)	-	728
Robes and dressing gowns	do	1,573	464	1,056	(NA)	(NA)	(D)	(D)
All other underwear, including slips, camisoles, teddies, undershirts, and union shirts	do	5,362	1,036	3,916	(NA)	(NA)	-	410
Other garments:								
Bodysuits and bodysuits	1,000 dozens	1,105	(D)	(D)	(NA)	(NA)	(D)	66
Jogging and warm-up suits	do	1,393	165	1,021	(NA)	(NA)	90	117
Overalls, coveralls, and jumpsuits	do	758	394	251	(NA)	35	-	78
Playsuits, rompers, halter, etc.	do	1,368	247	973	(NA)	-	(D)	(D)
Ski apparel	do	100	-	(D)	(NA)	(NA)	-	(D)
Suits, including pant suits	do	867	41	553	(NA)	145	(D)	(D)
Swimwear	do	3,903	(D)	3,836	(NA)	(NA)	-	(D)
Washable service apparel	do	2,166	360	1,386	(NA)	(NA)	-	420
Infants' apparel	do	14,927	9,388	4,263	(NA)	(NA)	190	1,086

See footnotes at end of table.

Table 47. QUANTITY OF PRODUCTION OF APPAREL BY TYPE OF FABRIC: 1991—Continued

Product description	Unit of measure	Total	Cotton	Manmade		Wool	Other	Not specified by kind (n.s.k.)
				Total	Wool blends only			
FOURTH QUARTER								
Men's and boys' garments:								
Suits.....	1,000 units.....	2,386	58	1,285	768	893	72	78
Coats, jackets, and vests:								
Down and feather filled coats, jackets, and vests.....	1,000 units.....	86	(D)	71	(NA)	(D)	-	5
Dress and sport coats (tailored).....	.....do.....	3,277	187	2,100	779	707	188	115
Heavy nontailored coats and jackets.....	.....do.....	3,404	551	2,126	(NA)	319	(D)	(D)
Lightweight nontailored coats and jackets.....	.....do.....	5,391	500	4,296	(NA)	25	(D)	(D)
Overcoats and top coats.....	.....do.....	185	(D)	(D)	(NA)	61	(D)	12
Raincoats.....	.....do.....	(D)	101	395	(NA)	(NA)	-	(D)
Separate vests.....	.....do.....	(D)	(D)	(D)	(NA)	4	-	26
Work jackets.....	1,000 dozens.....	101	(D)	(D)	(NA)	(NA)	(D)	-
Tops:								
Woven dress and business shirts.....	1,000 dozens.....	1,695	1,037	616	(NA)	(NA)	(D)	(D)
Woven sport shirts.....	.....do.....	552	361	140	(NA)	(D)	-	(D)
Work shirts.....	.....do.....	900	223	673	(NA)	(NA)	(NA)	4
Knit T-shirts and tank tops made for outerwear.....	.....do.....	12,529	9,503	2,338	(NA)	-	(D)	(D)
Sweatshirts.....	.....do.....	6,275	2,681	3,487	(NA)	-	-	107
Other knit shirts.....	.....do.....	2,593	1,236	1,062	(NA)	-	-	295
Sweaters.....	.....do.....	500	230	172	(NA)	74	(D)	(D)
Bottoms:								
Dress and sport trousers.....	1,000 units.....	26,661	7,623	16,666	3,641	925	(D)	(D)
Jeans and jean-cut casual slacks.....	.....do.....	70,004	65,311	1,947	(NA)	(NA)	(D)	(D)
Shorts.....	.....do.....	20,589	14,681	5,365	(NA)	-	12	531
Sweatpants.....	1,000 dozens.....	2,224	382	1,817	(NA)	(NA)	(NA)	25
Workpants.....	.....do.....	814	51	746	(NA)	(NA)	-	17
Underwear and nightwear:								
Pajamas and nightwear.....	1,000 dozens.....	521	144	366	(NA)	(NA)	(D)	(D)
Robes.....	.....do.....	137	53	81	(NA)	(NA)	-	3
All other underwear, including thermal underwear, undershirts, knit undershorts, and woven boxer shorts.....	.....do.....	25,565	23,900	(D)	(NA)	(NA)	-	(D)
Other garments:								
Coveralls, overalls, and jumpsuits.....	1,000 dozens.....	320	133	183	(NA)	-	-	4
Jogging and warm-up suits.....	.....do.....	215	6	192	(NA)	(NA)	-	17
Playsuits.....	.....do.....	78	60	(D)	(NA)	-	(D)	3
Ski apparel.....	.....do.....	100	-	2	(NA)	(NA)	-	98
Swimwear.....	.....do.....	97	52	41	(NA)	(NA)	-	4
Team sports uniforms.....	.....do.....	308	(D)	202	(NA)	-	-	(D)
Washable service apparel.....	.....do.....	352	44	240	(NA)	(NA)	-	68
Women's and girls' garments:								
Dresses.....	1,000 units.....	34,300	7,491	22,381	(NA)	654	1,296	2,478
Coats, jackets, and vests:								
Coats and capes.....	1,000 units.....	2,188	161	906	565	986	22	113
Down and feather filled coats, jackets, and vests.....	.....do.....	(D)	(D)	(D)	(NA)	-	(D)	-
Heavy nontailored coats and jackets.....	.....do.....	2,477	379	1,546	(NA)	57	98	397
Raincoats.....	.....do.....	228	(D)	143	(NA)	(NA)	(D)	2
Separate vests.....	.....do.....	(D)	-	31	(NA)	-	-	(D)
Tailored suit-type jackets.....	.....do.....	6,873	571	5,186	824	827	184	105
Tops:								
Woven blouses and shirts.....	1,000 dozens.....	3,421	960	2,232	(NA)	10	67	152
Knit T-shirts and tank tops made for outerwear.....	.....do.....	2,277	1,227	825	(NA)	(NA)	33	192
Sweatshirts.....	.....do.....	1,562	139	1,388	(NA)	(NA)	-	35
Other knit blouses and shirts.....	.....do.....	2,264	831	1,185	(NA)	(D)	(D)	170
Sweaters, including coat, cardigan, pullover and vest sweaters.....	.....do.....	937	393	361	(NA)	17	(D)	(D)
Bottoms:								
Shorts.....	1,000 units.....	13,899	6,625	6,009	(NA)	(NA)	54	1,211
Skirts and divided skirts.....	.....do.....	21,239	4,636	12,450	1,111	1,791	578	1,784
Slacks, pants, and jeans, including jean-cut casual slacks.....	.....do.....	65,203	35,177	25,282	1,747	538	736	3,470
Sweatpants.....	1,000 dozens.....	1,106	25	(D)	(NA)	(NA)	(D)	9
Underwear and nightwear:								
Brassieres, bra-lettes, and bandeaux.....	1,000 dozens.....	4,501	227	4,219	(NA)	(NA)	-	55
Girdles, corsets, and other foundation garments.....	.....do.....	1,750	(D)	1,373	(NA)	(NA)	-	(D)
Nightgowns, pajamas, and other nightwear.....	.....do.....	2,447	329	1,975	(NA)	(NA)	72	71
Panties.....	.....do.....	14,403	10,224	3,991	(NA)	(NA)	-	168
Robes and dressing gowns.....	.....do.....	433	141	279	(NA)	(NA)	(D)	(D)
All other underwear, including slips, camisoles, teddies, undershirts, and union shirts.....	.....do.....	1,413	289	1,024	(NA)	(NA)	-	100
Other garments:								
Bodysuits and bodyshirts.....	1,000 dozens.....	295	(D)	109	(NA)	(NA)	(D)	20
Jogging and warm-up suits.....	.....do.....	447	51	338	(NA)	(NA)	49	9
Overalls, coveralls, and jumpsuits.....	.....do.....	142	72	50	(NA)	(D)	-	(D)
Playsuits, rompers, halters, etc.....	.....do.....	368	46	287	(NA)	-	(D)	(D)
Ski apparel.....	.....do.....	19	-	3	(NA)	(NA)	-	16
Suits, including pant suits.....	.....do.....	200	9	134	53	31	6	20
Swimwear.....	.....do.....	1,017	(D)	1,002	(NA)	(NA)	-	(D)
Washable service apparel.....	.....do.....	555	66	386	(NA)	(NA)	-	103
Infants' apparel.....	.....do.....	3,944	2,555	983	(NA)	(NA)	103	203

See footnotes at end of table.

Table 47. QUANTITY OF PRODUCTION OF APPAREL BY TYPE OF FABRIC: 1991—Continued

Product description	Unit of measure	Total	Cotton	Manmade		Wool	Other	Not specified by kind (n.s.k.)
				Total	Wool blends only			
THIRD QUARTER								
Men's and boys' garments:								
Suits.....	1,000 units.....	2,253	55	1,139	665	931	37	91
Coats, jackets, and vests:								
Down and feather filled coats, jackets, and vests.....	1,000 units.....	(D)	(D)	97	(NA)	(D)	-	7
Dress and sport coats (tailored).....	.....do.....	3,448	153	2,100	649	909	(D)	(D)
Heavy nontailored coats and jackets.....	.....do.....	3,467	841	1,931	(NA)	256	43	396
Lightweight nontailored coats and jackets.....	.....do.....	3,721	307	2,935	(NA)	31	-	448
Overcoats and top coats.....	.....do.....	157	(D)	(D)	(NA)	41	(D)	11
Raincoats.....	.....do.....	708	(D)	376	(NA)	(NA)	-	(D)
Separate vests.....	.....do.....	(D)	(D)	(D)	(NA)	(D)	-	30
Work jackets.....	1,000 dozens.....	67	(D)	(D)	(NA)	(NA)	(D)	-
Tops:								
Woven dress and business shirts.....	1,000 dozens.....	1,679	1,025	619	(NA)	(NA)	(D)	(D)
Woven sport shirts.....	.....do.....	616	427	129	(NA)	(D)	-	(D)
Work shirts.....	.....do.....	853	232	617	(NA)	(NA)	(NA)	4
Knit T-shirts and tank tops made for outerwear.....	.....do.....	11,334	8,501	2,199	(NA)	-	(D)	(D)
Sweatshirts.....	.....do.....	5,776	2,263	3,399	(NA)	-	(D)	(D)
Other knit shirts.....	.....do.....	2,796	1,498	1,014	(NA)	-	-	284
Sweaters.....	.....do.....	641	221	223	(NA)	(D)	(D)	22
Bottoms:								
Dress and sport trousers.....	1,000 units.....	32,216	9,757	19,915	3,394	1,130	501	913
Jeans and jean-cut casual slacks.....	.....do.....	67,666	63,394	1,708	(NA)	(NA)	-	2,564
Shorts.....	.....do.....	15,095	9,963	4,681	(NA)	(D)	(D)	425
Sweatpants.....	1,000 dozens.....	2,282	398	1,857	(NA)	(NA)	(NA)	27
Workpants.....	.....do.....	758	54	688	(NA)	(NA)	-	16
Underwear and nightwear:								
Pajamas and nightwear.....	1,000 dozens.....	483	143	328	(NA)	(NA)	(D)	(D)
Robes.....	.....do.....	132	45	84	(NA)	(NA)	-	3
All other underwear, including thermal underwear, undershirts, knit undershorts, and woven boxer shorts.....	.....do.....	24,864	(D)	1,670	(NA)	(NA)	-	(D)
Other garments:								
Coveralls, overalls, and jumpsuits.....	1,000 dozens.....	428	161	252	(NA)	-	-	15
Jogging and warm-up suits.....	.....do.....	169	5	143	(NA)	(NA)	-	21
Playsuits.....	.....do.....	(D)	51	(D)	(NA)	-	(D)	3
Ski apparel.....	.....do.....	(D)	-	(D)	(NA)	(NA)	-	103
Swimwear.....	.....do.....	90	50	35	(NA)	(NA)	-	5
Team sports uniforms.....	.....do.....	257	(D)	168	(NA)	-	-	(D)
Washable service apparel.....	.....do.....	465	83	290	(NA)	(NA)	-	92
Women's and girls' garments:								
Dresses.....	1,000 units.....	38,073	8,911	24,467	(NA)	782	1,165	2,748
Coats, jackets, and vests:								
Coats and capes.....	1,000 units.....	2,632	153	801	473	1,483	49	146
Down and feather filled coats, jackets, and vests.....	.....do.....	7	(D)	(D)	(NA)	-	-	-
Heavy nontailored coats and jackets.....	.....do.....	2,400	461	1,206	(NA)	136	114	483
Raincoats.....	.....do.....	(D)	(D)	(D)	(NA)	(NA)	-	4
Separate vests.....	.....do.....	(D)	-	43	(NA)	-	-	(D)
Tailored suit-type jackets.....	.....do.....	6,396	518	4,116	1,417	1,513	151	98
Tops:								
Woven blouses and shirts.....	1,000 dozens.....	3,731	1,339	2,156	(NA)	12	61	163
Knit T-shirts and tank tops made for outerwear.....	.....do.....	2,005	969	838	(NA)	(NA)	29	169
Sweatshirts.....	.....do.....	1,233	101	1,088	(NA)	(NA)	(D)	(D)
Other knit blouses and shirts.....	.....do.....	2,602	1,085	1,281	(NA)	(D)	(D)	172
Sweaters, including coat, cardigan, pullover and vest sweaters.....	.....do.....	939	333	472	(NA)	26	26	82
Bottoms:								
Shorts.....	1,000 units.....	11,251	5,175	5,142	(NA)	(NA)	79	855
Skirts and divided skirts.....	.....do.....	25,906	4,433	15,670	1,503	3,146	556	2,101
Slacks, pants, and jeans, including jean-cut casual slacks.....	.....do.....	77,347	41,182	30,589	2,172	1,071	621	3,884
Sweatpants.....	1,000 dozens.....	813	(D)	755	(NA)	(NA)	(D)	9
Underwear and nightwear:								
Brassieres, bra-lettes, and bandeaux.....	1,000 dozens.....	4,595	198	4,346	(NA)	(NA)	-	51
Girdles, corsets, and other foundation garments.....	.....do.....	1,415	(D)	1,126	(NA)	(NA)	-	(D)
Nightgowns, pajamas, and other nightwear.....	.....do.....	2,324	316	1,935	(NA)	(NA)	(D)	(D)
Panties.....	.....do.....	14,242	9,867	4,190	(NA)	(NA)	-	185
Robes and dressing gowns.....	.....do.....	441	102	323	(NA)	(NA)	(D)	(D)
All other underwear, including slips, camisoles, teddies, undershirts, and union shirts.....	.....do.....	1,388	275	1,013	(NA)	(NA)	-	100
Other garments:								
Bodysuits and bodyshirts.....	1,000 dozens.....	295	(D)	(D)	(NA)	(NA)	(D)	21
Jogging and warm-up suits.....	.....do.....	327	42	235	(NA)	(NA)	41	9
Overalls, coveralls, and jumpsuits.....	.....do.....	282	123	110	(NA)	(D)	-	(D)
Playsuits, rompers, halter, etc.....	.....do.....	262	44	199	(NA)	-	(D)	(D)
Ski apparel.....	.....do.....	40	-	13	(NA)	(NA)	-	27
Suits, including pant suits.....	.....do.....	201	11	105	31	60	(D)	(D)
Swimwear.....	.....do.....	424	13	403	(NA)	(NA)	-	8
Washable service apparel.....	.....do.....	565	69	392	(NA)	(NA)	-	104
Infants' apparel.....	.....do.....	3,994	2,454	1,172	(NA)	(NA)	70	298

See footnotes at end of table.

Table 47. QUANTITY OF PRODUCTION OF APPAREL BY TYPE OF FABRIC: 1991—Continued

Product description	Unit of measure	Total	Cotton	Manmade		Wool	Other	Not specified by kind (n.s.k.)
				Total	Wool blends only			
SECOND QUARTER								
Men's and boys' garments:								
Suits.....	1,000 units.....	2,294	52	1,253	788	857	41	91
Coats, jackets, and vests:								
Down and feather filled coats, jackets, and vests.....	1,000 units.....	(D)	(D)	69	(NA)	(D)	(D)	5
Dress and sport coats (tailored).....	.....do.....	3,070	150	1,980	746	698	91	151
Heavy nontailored coats and jackets.....	.....do.....	2,818	426	1,727	(NA)	318	31	316
Lightweight nontailored coats and jackets.....	.....do.....	3,394	237	2,701	(NA)	(D)	(D)	402
Overcoats and top coats.....	.....do.....	198	(D)	(D)	(NA)	83	(D)	12
Raincoats.....	.....do.....	811	153	395	(NA)	(NA)	(D)	(D)
Separate vests.....	.....do.....	(D)	(D)	(D)	(NA)	(D)	(D)	33
Work jackets.....	1,000 dozens.....	57	(D)	(D)	(NA)	(NA)	(D)	-
Tops:								
Woven dress and business shirts.....	1,000 dozens.....	1,665	1,002	621	(NA)	(NA)	3	39
Woven sport shirts.....	.....do.....	482	306	124	(NA)	(D)	-	(D)
Work shirts.....	.....do.....	861	157	700	(NA)	(NA)	(NA)	4
Knit T-shirts and tank tops made for outerwear.....	.....do.....	12,809	9,397	2,732	(NA)	-	-	680
Sweatshirts.....	.....do.....	4,210	2,029	2,098	(NA)	-	-	83
Other knit shirts.....	.....do.....	2,759	1,371	1,107	(NA)	-	-	281
Sweaters.....	.....do.....	395	141	170	(NA)	64	(D)	(D)
Bottoms:								
Dress and sport trousers.....	1,000 units.....	28,326	8,326	17,890	3,108	1,035	213	862
Jeans and jean-cut casual slacks.....	.....do.....	66,204	61,891	1,787	(NA)	(NA)	-	2,526
Shorts.....	.....do.....	19,527	11,450	7,648	(NA)	(D)	(D)	389
Sweatpants.....	1,000 dozens.....	1,584	556	1,005	(NA)	(NA)	(NA)	23
Workpants.....	.....do.....	932	66	847	(NA)	(NA)	-	19
Underwear and nightwear:								
Pajamas and nightwear.....	1,000 dozens.....	380	93	279	(NA)	(NA)	(D)	(D)
Robes.....	.....do.....	80	25	54	(NA)	(NA)	-	1
All other underwear, including thermal underwear, undershirts, knit undershorts, and woven boxer shorts.....	.....do.....	24,775	23,330	1,417	(NA)	(NA)	-	28
Other garments:								
Coveralls, overalls, and jumpsuits.....	1,000 dozens.....	301	130	157	(NA)	-	-	14
Jogging and warm-up suits.....	.....do.....	140	20	104	(NA)	(NA)	-	16
Playsuits.....	.....do.....	97	(D)	10	(NA)	-	(D)	3
Ski apparel.....	.....do.....	(D)	-	(D)	(NA)	(NA)	-	49
Swimwear.....	.....do.....	118	84	29	(NA)	(NA)	-	5
Team sports uniforms.....	.....do.....	(D)	(D)	222	(NA)	-	-	(D)
Washable service apparel.....	.....do.....	520	(D)	308	(NA)	(NA)	-	(D)
Women's and girls' garments:								
Dresses.....	1,000 units.....	42,212	9,983	26,974	(NA)	398	1,832	3,025
Coats, jackets, and vests:								
Coats and capes.....	1,000 units.....	2,039	185	818	556	908	21	107
Down and feather filled coats, jackets, and vests.....	.....do.....	5	-	(D)	(NA)	-	(D)	-
Heavy nontailored coats and jackets.....	.....do.....	1,870	338	975	(NA)	86	91	380
Raincoats.....	.....do.....	(D)	(D)	(D)	(NA)	(NA)	-	2
Separate vests.....	.....do.....	(D)	(D)	(D)	(NA)	-	-	43
Tailored suit-type jackets.....	.....do.....	6,204	573	4,564	1,211	777	198	92
Tops:								
Woven blouses and shirts.....	1,000 dozens.....	4,092	1,502	2,277	(NA)	4	127	182
Knit T-shirts and tank tops made for outerwear.....	.....do.....	2,492	1,374	909	(NA)	(NA)	(D)	(D)
Sweatshirts.....	.....do.....	727	31	671	(NA)	(NA)	-	25
Other knit blouses and shirts.....	.....do.....	2,099	890	983	(NA)	(D)	(D)	173
Sweaters, including coat, cardigan, pullover and vest sweaters.....	.....do.....	644	246	292	(NA)	24	14	68
Bottoms:								
Shorts.....	1,000 units.....	16,018	6,620	8,379	(NA)	(NA)	62	957
Skirts and divided skirts.....	.....do.....	23,627	5,628	13,965	944	1,656	485	1,893
Slacks, pants, and jeans, including jean-cut casual slacks.....	.....do.....	75,204	41,152	29,085	1,711	401	572	3,994
Sweatpants.....	1,000 dozens.....	594	(D)	575	(NA)	(NA)	(D)	7
Underwear and nightwear:								
Brassieres, bra-lettes, and bandeaux.....	1,000 dozens.....	4,602	199	4,334	(NA)	(NA)	-	69
Girdles, corsets, and other foundation garments.....	.....do.....	1,450	(D)	1,141	(NA)	(NA)	-	(D)
Nightgowns, pajamas, and other nightwear.....	.....do.....	2,074	329	1,689	(NA)	(NA)	8	48
Panties.....	.....do.....	14,144	9,612	4,351	(NA)	(NA)	-	181
Robes and dressing gowns.....	.....do.....	318	98	208	(NA)	(NA)	(D)	(D)
All other underwear, including slips, camisoles, teddies, undershirts, and union shirts.....	.....do.....	1,335	289	948	(NA)	(NA)	-	96
Other garments:								
Bodysuits and bodyshirts.....	1,000 dozens.....	313	(D)	124	(NA)	(NA)	(D)	20
Jogging and warm-up suits.....	.....do.....	285	33	207	(NA)	(NA)	-	45
Overalls, coveralls, and jumpsuits.....	.....do.....	158	94	44	(NA)	-	-	20
Playsuits, rompers, halters, etc.....	.....do.....	401	69	296	(NA)	-	(D)	(D)
Ski apparel.....	.....do.....	22	-	3	(NA)	(NA)	-	19
Suits, including pant suits.....	.....do.....	217	13	129	34	43	6	26
Swimwear.....	.....do.....	916	8	899	(NA)	(NA)	-	9
Washable service apparel.....	.....do.....	483	104	274	(NA)	(NA)	-	105
Infants' apparel.....	.....do.....	3,481	2,137	1,078	(NA)	(NA)	12	254

See footnotes at end of table.

Table 47. QUANTITY OF PRODUCTION OF APPAREL BY TYPE OF FABRIC: 1991—Continued

Product description	Unit of measure	Total	Cotton	Manmade		Wool	Other	Not specified by kind (n.s.k.)
				Total	Wool blends only			
FIRST QUARTER								
Men's and boys' garments:								
Suits	1,000 units	2,573	75	1,486	828	876	111	25
Coats, jackets, and vests:								
Down and feather filled coats, jackets, and vests	1,000 units	109	(D)	87	(NA)	(D)	-	11
Dress and sport coats (tailored) . . . . .	. . . . .	3,888	168	2,627	866	777	164	152
Heavy nontailored coats and jackets . . . . .	. . . . .	3,130	477	2,052	(NA)	203	33	365
Lightweight nontailored coats and jackets . . . . .	. . . . .	3,868	259	3,091	(NA)	33	(D)	(D)
Overcoats and top coats . . . . .	. . . . .	184	(D)	(D)	(NA)	54	(D)	26
Raincoats . . . . .	. . . . .	783	122	418	(NA)	(NA)	-	243
Separate vests . . . . .	. . . . .	245	-	(D)	(NA)	(D)	(D)	22
Work jackets	1,000 dozens	80	(D)	(D)	(NA)	(NA)	(D)	1
Tops:								
Woven dress and business shirts	1,000 dozens	1,679	946	688	(NA)	(NA)	5	40
Woven sport shirts . . . . .	. . . . .	574	364	152	(NA)	(D)	-	(D)
Work shirts . . . . .	. . . . .	748	124	621	(NA)	(NA)	(NA)	3
Knit T-shirts and tank tops made for outerwear . . . . .	. . . . .	12,046	8,464	2,953	(NA)	-	(D)	(D)
Sweatshirts . . . . .	. . . . .	3,864	1,961	1,829	(NA)	-	-	74
Other knit shirts . . . . .	. . . . .	2,573	1,271	1,027	(NA)	-	-	275
Sweaters . . . . .	. . . . .	262	108	109	(NA)	22	(D)	(D)
Bottoms:								
Dress and sport trousers	1,000 units	27,636	7,574	18,135	2,980	988	143	796
Jeans and jean-cut casual slacks . . . . .	. . . . .	52,667	49,084	1,633	(NA)	(NA)	-	1,950
Shorts . . . . .	. . . . .	25,092	13,648	10,881	(NA)	(D)	(D)	519
Sweatpants	1,000 dozens	1,268	532	708	(NA)	(NA)	(NA)	28
Workpants . . . . .	. . . . .	855	62	777	(NA)	(NA)	-	16
Underwear and nightwear:								
Pajamas and nightwear	1,000 dozens	293	82	203	(NA)	(NA)	(D)	(D)
Robes . . . . .	. . . . .	66	23	41	(NA)	(NA)	-	2
All other underwear, including thermal underwear, undershirts, knit undershorts, and woven boxer shorts . . . . .	. . . . .	21,592	(D)	1,645	(NA)	(NA)	-	(D)
Other garments:								
Coveralls, overalls, and jumpsuits	1,000 dozens	331	157	168	(NA)	-	-	6
Jogging and warm-up suits . . . . .	. . . . .	141	18	98	(NA)	(NA)	-	25
Playsuits . . . . .	. . . . .	125	105	(D)	(NA)	-	(D)	4
Ski apparel . . . . .	. . . . .	69	-	(D)	(NA)	(NA)	-	(D)
Swimwear . . . . .	. . . . .	210	104	101	(NA)	(NA)	-	5
Team sports uniforms . . . . .	. . . . .	300	(D)	196	(NA)	-	-	(D)
Washable service apparel . . . . .	. . . . .	532	(D)	321	(NA)	(NA)	-	(D)
Women's and girls' garments:								
Dresses	1,000 units	46,735	12,518	29,026	(NA)	223	1,686	3,282
Coats, jackets, and vests:								
Coats and capes	1,000 units	1,172	155	439	242	404	77	97
Down and feather filled coats, jackets, and vests . . . . .	. . . . .	7	-	(D)	(NA)	-	(D)	-
Heavy nontailored coats and jackets . . . . .	. . . . .	1,918	579	778	(NA)	59	98	404
Raincoats . . . . .	. . . . .	355	(D)	(D)	(NA)	(NA)	-	4
Separate vests . . . . .	. . . . .	50	(D)	8	(NA)	-	-	(D)
Tailored suit-type jackets . . . . .	. . . . .	5,390	666	3,908	835	428	286	102
Tops:								
Woven blouses and shirts	1,000 dozens	3,737	1,219	2,198	(NA)	11	147	162
Knit T-shirts and tank tops made for outerwear . . . . .	. . . . .	3,190	1,616	1,344	(NA)	(NA)	37	193
Sweatshirts . . . . .	. . . . .	642	66	553	(NA)	(NA)	-	23
Other knit blouses and shirts . . . . .	. . . . .	1,820	865	735	(NA)	(D)	(D)	161
Sweaters, including coat, cardigan, pullover and vest sweaters . . . . .	. . . . .	525	235	209	(NA)	14	7	60
Bottoms:								
Shorts	1,000 units	21,288	10,367	9,562	(NA)	(NA)	106	1,253
Skirts and divided skirts . . . . .	. . . . .	22,321	4,803	13,761	555	1,078	732	1,947
Slacks, pants, and jeans, including jean-cut casual slacks . . . . .	. . . . .	63,024	34,839	23,882	1,683	(D)	505	(D)
Sweatpants	1,000 dozens	365	7	(D)	(NA)	(NA)	(D)	6
Underwear and nightwear:								
Brassieres, bra-lettes, and bandeaux	1,000 dozens	4,292	197	4,042	(NA)	(NA)	-	53
Girdles, corsets, and other foundation garments . . . . .	. . . . .	1,344	(D)	1,059	(NA)	(NA)	-	(D)
Nightgowns, pajamas, and other nightwear . . . . .	. . . . .	2,229	330	1,803	(NA)	(NA)	41	55
Panties . . . . .	. . . . .	12,784	8,441	4,169	(NA)	(NA)	-	174
Robes and dressing gowns . . . . .	. . . . .	381	123	246	(NA)	(NA)	(D)	(D)
All other underwear, including slips, camisoles, teddies, undershirts, and union shirts . . . . .	. . . . .	1,226	183	931	(NA)	(NA)	-	112
Other garments:								
Bodysuits and bodyshirts	1,000 dozens	202	(D)	105	(NA)	(NA)	(D)	5
Jogging and warm-up suits . . . . .	. . . . .	334	39	241	(NA)	(NA)	-	54
Overalls, coveralls, and jumpsuits . . . . .	. . . . .	176	105	47	(NA)	-	-	24
Playsuits, rompers, halters, etc. . . . .	. . . . .	337	88	191	(NA)	-	(D)	(D)
Ski apparel . . . . .	. . . . .	19	-	(D)	(NA)	(NA)	-	(D)
Suits, including pant suits . . . . .	. . . . .	249	8	185	27	25	5	26
Swimwear . . . . .	. . . . .	1,546	5	1,532	(NA)	(NA)	-	9
Washable service apparel . . . . .	. . . . .	563	121	334	(NA)	(NA)	-	108
Infants' apparel . . . . .	. . . . .	3,508	2,242	1,030	(NA)	(NA)	5	231

- Represents zero.

(D) Data withheld to avoid disclosing figures for individual companies.

(NA) Not available.

Table 48. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED APPAREL ITEMS: 1992 AND 1991**

[Quantity in thousands of dozens; value in millions of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		"807" imports ²			Imports for consumption ⁵		Apparent consumption ⁷		Percent imports to apparent consumption	
	Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	Value U.S. content ³	Total value ⁴	Quantity	Value ⁶	Quantity	Value	Quantity	Value
1992													
Men's and boys':													
Sweaters.....	1,948	255.3	1,830	53.3	7	-	1.0	3,766	571.9	3,884	773.9	97.0	73.9
Shirts.....	108,557	6,661.7	14,595	458.9	5,331	184.4	325.0	61,712	5,184.6	155,674	11,387.4	39.6	45.5
Bottoms ^{8 9}	52,355	7,162.1	16,778	727.9	13,691	619.5	905.0	36,688	2,983.8	72,265	9,418.0	50.8	31.7
Coats:													
Suit type, dress and sport ..	1,119	808.7	664	52.3	284	47.8	75.0	812	342.1	1,267	1,098.5	64.1	31.1
Other coats ^{9 10}	3,313	1,217.6	959	70.1	182	12.8	25.7	3,516	734.6	5,870	1,882.1	59.9	39.0
Suits ^{1 12}	836	1,093.5	358	49.1	55	7.3	14.5	456	462.4	934	1,506.8	48.8	30.7
Swimwear.....	463	52.6	78	3.7	126	3.6	5.8	4,671	195.9	5,056	244.8	92.4	80.0
Women's and girl's apparel:													
Sweaters ¹³	3,212	512.4	635	32.0	23	0.5	7.9	12,367	1,968.8	14,944	2,449.2	82.8	80.4
Dresses ¹⁴	13,158	4,226.2	1,394	99.3	729	33.6	78.2	6,671	1,062.8	18,435	5,189.7	36.2	20.5
Blouses and shirts ¹⁵	37,944	3,515.7	6,951	168.0	6,009	152.7	262.7	75,158	5,882.1	106,151	9,229.8	70.8	63.7
Skirts ¹⁶	7,642	1,471.5	831	43.5	1,193	49.9	103.7	8,075	947.4	14,886	2,375.4	54.2	39.9
Coats and jackets ¹⁷	3,872	1,836.3	2,704	123.3	1,250	133.4	262.3	6,245	1,539.2	7,413	3,252.2	84.2	47.3
Slacks and shorts ¹⁸	35,748	4,306.9	6,907	280.0	8,571	327.7	547.1	44,031	3,659.5	72,872	7,686.4	60.4	47.6
Suits ¹⁹	786	278.7	590	63.6	81	18.5	28.6	727	291.9	923	507.0	78.8	57.6
Swimwear ²⁰	3,871	625.1	306	15.0	331	10.9	16.0	1,360	103.8	4,925	713.9	27.6	14.5
Other apparel (men's/women's):													
Playsuits.....	1,631	121.9	-	-	287	6.1	11.2	3,029	178.0	4,660	299.9	65.0	59.4
Coveralls, etc.....	1,984	364.4	986	34.0	219	17.2	24.8	3,040	253.5	4,038	583.9	75.3	43.4
Robes and dressing gowns...	1,944	314.5	1,958	22.6	381	9.6	20.0	2,282	268.9	2,268	560.8	100.6	47.9
Pajamas and other nightwear...	10,649	916.0	2,218	64.2	2,465	58.6	105.9	9,324	686.4	17,755	1,538.2	52.5	44.6
Underwear except foundation garments.....	171,124	2,589.7	23,807	294.4	30,842	242.0	320.5	70,082	964.4	217,399	3,259.7	32.2	29.6
Foundation garments.....	26,290	1,547.2	17,913	252.6	18,057	275.6	415.0	23,681	614.1	32,058	1,908.7	73.9	32.2
Infants' apparel.....	14,168	713.6	3,712	62.6	2,694	40.3	67.4	22,925	693.1	33,381	1,344.1	68.7	51.6
1991													
Men's and boys':													
Sweaters.....	1,798	268.3	867	31.5	3	0.2	1.4	3,966	570.5	4,897	807.3	81.0	70.7
Shirts.....	91,868	5,668.3	11,543	332.8	3,522	100.6	183.0	49,035	4,073.9	129,360	9,409.4	37.9	43.3
Bottoms ^{8 9}	48,357	6,675.9	14,166	598.2	10,416	478.9	696.0	29,846	2,649.8	64,037	8,727.5	46.6	30.4
Coats:													
Suit type, dress and sport ..	1,140	793.0	595	51.3	240	38.6	61.2	687	297.8	1,232	1,039.5	55.8	28.6
Other coats ^{9 10}	(D)	(D)	795	56.0	130	7.7	18.6	2,899	608.1	(D)	(D)	(D)	(D)
Suits ^{11 12}	792	1,106.5	372	28.2	65	6.9	13.6	394	400.5	814	1,478.8	48.4	27.1
Swimwear.....	515	54.1	108	3.0	153	3.6	7.3	3,847	174.6	4,254	225.7	90.4	77.4
Women's and girl's apparel:													
Sweaters ¹³	3,045	468.9	541	26.0	28	0.7	5.0	11,867	1,758.5	14,371	2,201.4	82.6	79.9
Dresses ¹⁴	13,443	4,529.9	1,029	65.0	654	30.9	65.6	6,610	1,097.6	19,024	5,562.5	34.7	19.7
Blouses and shirts ¹⁵	37,894	3,696.1	3,549	98.1	4,360	113.4	201.3	64,543	5,127.4	98,888	8,725.4	65.3	58.8
Skirts ¹⁶	7,758	1,511.0	959	43.8	1,130	52.6	89.7	7,250	881.1	14,049	2,348.3	51.6	37.5
Coats and jackets ¹⁷	(D)	(D)	1,041	91.5	953	94.8	178.2	5,637	1,463.0	(D)	(D)	(D)	(D)
Slacks and shorts ¹⁸	31,481	3,827.0	4,871	193.5	6,984	253.4	426.6	35,723	3,180.7	62,333	6,814.2	57.3	46.7
Suits ¹⁹	867	310.5	416	43.3	100	21.7	31.9	663	269.6	1,114	536.8	59.5	50.2
Swimwear ²⁰	3,903	593.4	204	9.8	193	5.8	8.5	1,217	88.9	4,916	672.5	24.8	13.2

See footnotes at end of table.

Table 48. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED APPAREL ITEMS: 1992 AND 1991—Continued**

[Quantity in thousands of dozens; value in millions of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		"807" imports ²			Imports for consumption ⁵		Apparent consumption ⁷		Percent imports to apparent consumption	
	Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	Value U.S. content ³	Total value ⁴	Quantity	Value ⁵	Quantity	Value	Quantity	Value
1991—Cont.													
Other apparel (men's/women's):													
Playsuits	(D)	(D)	-	-	226	4.5	8.3	2,113	119.0	(D)	(D)	(D)	(D)
Coveralls, etc.	2,138	349.8	862	19.9	293	21.8	33.3	3,000	302.5	4,276	632.4	70.2	47.8
Robes and dressing gowns...	1,988	360.8	1,735	23.2	261	6.4	13.1	2,024	258.5	2,277	596.1	88.9	43.4
Pajamas and other nightwear.	10,751	940.0	1,910	57.0	2,109	50.2	84.5	8,087	573.6	16,928	1,456.6	47.8	39.4
Underwear except foundation garments.....	157,731	2,514.1	15,325	219.9	23,084	179.6	237.6	54,602	795.6	197,008	3,089.8	27.7	25.7
Foundation garments	23,949	1,367.8	15,983	219.0	14,980	219.0	317.4	20,225	523.3	28,191	1,672.1	71.7	31.3
Infants' apparel	14,927	690.8	2,625	43.0	2,445	29.6	53.4	20,881	590.7	33,183	1,238.5	62.9	47.7

Note: For comparison of SIC-based product codes with Schedule B export numbers and HTSUSA import numbers, see appendix B.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.²Represents apparel which is cut in the United States, sent outside the country to be sewn, and then returned to the United States under 807 of Schedule 8, Special Classification Provisions of the Tariff Schedules of the United States, and is included in domestic output, imports, and exports. Because 807 garments are exported in pieces, the export quantity data may be overstated since some data may be reported in pieces rather than completed garments.³Represents the value of the U.S. fabricated components.⁴Represents the total c.i.f. (cost, insurance, and freight) value of the article which includes the value of the U.S. fabricated components and foreign processing.⁵Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.⁶This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus U.S. import duties.⁷Apparent consumption represents new domestic supply and is derived by subtracting exports from the sum of manufacturers' shipments plus imports.⁸Imports and exports exclude wool knit trousers, slacks, and shorts.⁹Exports exclude fibers other than cotton and manmade.¹⁰Imports include a small amount of sport coats not collected separately.¹¹Imports exclude cotton and wool knit suits.¹²Exports exclude wool knit and other fibers.¹³Imports figures represent only cotton and manmade fiber pajamas and other nightwear.¹⁴Exports exclude other fibers.¹⁵Imports exclude wool other than knit ornamented.¹⁶Excludes domestic production of women's sweat shirts which were withheld to avoid disclosing figures for individual companies.¹⁷Imports exclude silk not ornamented.¹⁸Imports exclude wool knit ornamented, knit vegetable fibers (except cotton not ornamented), and silk not ornamented.¹⁹Imports exclude wool ornamented and wool knit ornamented under \$5.00 per pound.²⁰Imports exclude cotton, other knit vegetable fibers, and silk.

2.7 GLOVES AND MITTENS

Table 49. QUANTITY AND VALUE OF SHIPMENTS OF GLOVES AND MITTENS: 1983 TO 1992

[Quantity in thousand dozen pairs; value in millions of dollars]

Year	Dress gloves and mittens		Work gloves and mittens, excluding rubber		Rubber gloves	
	Quantity	Value	Quantity	Value	Quantity	Value
1992.....	(D)	(D)	(D)	(D)	171,850	340.4
1991.....	(D)	(D)	(D)	(D)	160,134	332.5
1990.....	(D)	(D)	(D)	(D)	146,140	314.6
1989.....	6,801	(NA)	24,757	(NA)	146,476	330.9
1988.....	5,878	(NA)	25,060	(NA)	167,052	362.7
1987.....	5,164	(NA)	24,559	(NA)	144,776	347.1
1986.....	3,268	69.3	19,264	281.1	125,683	322.1
1985.....	3,129	76.4	19,742	283.0	100,684	304.4
1984.....	2,585	66.7	20,980	308.8	96,562	283.7
1983.....	2,005	59.9	18,222	263.7	81,804	233.8

Note: Beginning in 1987, data for rubber or plastic dipped supported gloves are included under work gloves and mittens rather than rubber or plastic.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available.

Table 50. QUANTITY AND VALUE OF SHIPMENTS OF GLOVES AND MITTENS: 1992 AND 1991

[Quantity in thousands of dozens; value in millions of dollars]

Product description	1992		1991	
	Quantity	Value	Quantity	Value
All fabric gloves and mittens.....	30,553	287.6	30,082	304.5
Woven fabric gloves and mittens.....	4,375	55.1	4,893	65.8
Impregnated with rubber/plastic.....	578	8.1	447	9.4
Greater than 50 percent plastics or rubber.....	(D)	(D)	(D)	(D)
Cotton.....	519	6.9	230	2.7
Manmade.....	(D)	(D)	(D)	(D)
Other.....	-	-	-	-
Non-impregnated.....	3,797	47.0	4,446	56.4
Cotton.....	3,775	45.0	4,427	55.1
Manmade.....	19	0.9	17	0.8
Wool.....	(D)	(D)	(D)	(D)
Other.....	(D)	(D)	(D)	(D)
Knit fabric gloves and mittens.....	26,178	232.5	25,189	238.7
Impregnated with rubber/plastic.....	6,773	89.5	5,137	86.1
Greater than 50 percent plastics or rubber.....	3,659	69.7	3,962	72.6
Cotton.....	2,586	15.8	759	10.3
Manmade.....	(D)	(D)	(D)	(D)
Other.....	(D)	(D)	(D)	(D)
Non-impregnated.....	19,945	143.0	20,052	152.6
Cotton.....	19,427	135.1	13,038	95.6
Terry/looped pile.....	1,797	22.7	832	9.0
Jersey, brushed, napped.....	4,570	53.6	5,654	65.1
Lisle (no nap or brush).....	(D)	(D)	1,627	5.8
Other.....	(D)	(D)	4,925	15.7
Manmade.....	(D)	(D)	(D)	(D)
Wool.....	(D)	(D)	(D)	(D)
Other.....	(D)	(D)	(D)	(D)
Leather and fabric combination gloves.....	343	17.2	429	23.9
All leather gloves and mittens.....	1,174	111.7	1,382	110.8
All grain leather.....	654	65.1	797	68.5
All split leather.....	428	37.2	503	36.6
All other leather gloves.....	92	9.4	82	5.7
All plastic gloves.....	30,114	36.3	33,397	23.4
Medical and surgical.....	(D)	(D)	(D)	(D)
All other.....	(D)	(D)	(D)	(D)
All rubber gloves.....	171,850	340.4	160,134	332.5
Medical and surgical.....	149,102	233.6	143,996	224.8
All other.....	22,748	106.8	16,138	107.7

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

*Revised by 5 percent or more from previously published figures.

Table 51. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF GLOVES AND MITTENS: 1992 AND 1991**

[Quantity in thousand dozen pairs; value and calculated import duty in millions of dollars]

Product code	Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Percent exports to manufacturers' shipments		Imports for consumption ²		Apparent consumption ⁴		Percent imports to apparent consumption	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value ³	Quantity	Value	Quantity	Value
	1992												
23813	Knitted, not coated or impregnated gloves and mittens	19,945	143.0	772	10.0	3.9	7.0	19,559	126.2	38,772	259.2	50.4	48.7
3069D	Knitted, plastic or rubber, coated or impregnated gloves and mittens	6,773	89.5	2,135	23.4	31.5	26.1	3,609	33.0	8,247	99.1	43.8	33.3
23813	Woven, non impregnated gloves and mittens	3,797	47.0	731	4.9	19.3	10.4	8,436	45.0	11,502	87.1	73.3	51.7
3069D	Woven impregnated gloves and mittens	578	8.1	1,157	7.8	50.0	96.3	628	5.3	1,207	5.6	52.0	94.6
23814, 31510	All leather and leather and fabric combination gloves and mittens	1,517	128.9	363	12.2	23.9	47.7	10,915	311.7	12,069	428.4	90.4	72.8
30698	Rubber, surgical and medical gloves	149,102	233.6	18,367	42.9	12.3	18.4	476,087	358.9	606,823	549.6	78.5	65.3
3069D	Rubber, other gloves	22,748	106.8	1,812	18.1	79.9	16.9	79,119	89.0	100,057	177.7	79.1	50.1
30896	Plastic, surgical and medical gloves AND												
30896	Plastic, other gloves	30,114	36.3	9,913	43.5	32.9	83.4	168,335	68.0	188,539	75.2	89.4	81.5
	1991												
23813	Knit fabric gloves and mittens	20,052	152.6	762	9.9	3.8	6.5	11,288	45.9	30,578	188.6	36.9	24.3
	Woven fabric gloves and mittens	4,446	56.4	966	5.8	21.7	10.3	8,077	51.8	11,557	102.4	69.9	50.6
23814, 31510	All leather and leather and fabric combination gloves and mittens	1,811	134.7	377	13.1	20.8	9.7	8,303	185.5	9,737	307.1	85.3	60.4
3069D, 30896	Rubber or plastic coated, partially coated, impregnated, and dipped supported gloves	5,584	95.5	2,569	24.3	46.0	25.4	4,173	39.6	7,188	110.8	58.1	35.7
30698	Rubber dipped, unsupported	160,134	332.5	28,291	71.3	17.7	21.4	315,666	275.8	447,509	537.0	70.5	51.4
30896	All plastic gloves	33,397	23.4	7,332	32.0	22.0	73.1	138,885	57.4	164,950	48.8	84.2	117.6

Note: Export and import data include glove linings which are not available by separate classification; however, this item is not included in manufacturers' shipments. Comparison of SIC-based product codes with Schedule B export numbers and HTSUSA import numbers is shown in appendix B.

¹Revised by 5 percent or more from previously published figures.

²Source: Bureau of the Census report EM 545, *U.S. Exports*.

³Source: Bureau of the Census reports IM 145, *U.S. Imports for Consumption*.

⁴This dollar value represents the c.i.f. (cost, insurance, and freight) value at first port of entry in the United States plus U.S. import duties.

⁵Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufacturers' shipments plus imports.

HISTORICAL NOTE

Data on apparel have been collected by the Bureau of the Census since 1923. In 1955, the MA23A apparel series consolidated, on an annual basis, five separate series which were formerly conducted independently (between 1923 and 1954). The 1968 apparel report was the first in this series to show quantity and value for each major product description. Previously, only product class values and/or production data were published.

For the years 1980 through 1985, similar data were published separately as MA23E, Men's and Boys' Outerwear, MA23F, Women's and Children's Outerwear, and MA23G, Underwear and Nightwear. Prior to 1984, data on foundation garments were published separately as MA23J, Foundation Garments.

The data were again published on an annual basis from 1986 through 1989 as the MA23A. Since 1990, the data

have been published quarterly as the MQ23A. The annual summary shows any revisions to the quarterly data.

Data on gloves and mittens have also been collected since 1923. They are collected on MA23D, Gloves and Mittens.

Additional information for the apparel industry (employment, payroll, cost of materials, capital expenditures, inventories, etc.) is also collected by the Bureau of the Census and is shown in the census of manufactures and the annual survey of manufactures series.

CONTACT FOR DATA USERS

For additional information on these data, contact Karen Harshbarger, 301-763-4476 or Andrew Kravnak, 301-763-7108.

2.8 SHEETS, PILLOWCASES, AND TOWELS

INTRODUCTION

The data shown for sheets, pillowcases, and towels are for finished products. They do not include sheeting fabrics that may be used later in items such as comforter sets. However, included is a category for terry towel blanks which are generally sold for further embellishment.

EXPLANATION OF TERMS

Distribution Channels:

Branded Retail. Sales of company brands, including premium goods, drops (closeouts), and seconds sold to domestic consumers through all types of retailers.

Private Ticket Retail. Sales with retail identification, with or without a manufacturer's corporate identification, but not with a manufacturer's brand name.

Other (Institutional). Includes domestic distribution only and includes all Federal and state contract business commercial accounts (e.g., hotels) which are sold on a contract basis, and shipments to dealers who are involved in resale to the institutional trade.

Exports. Includes only direct company shipments for export, usually through a domestic international sales corporation, regardless of put-up or packaging. Export shipments through jobbers or distributors are included in the other categories (e.g., branded or private ticket).

Inventories. Represents the quantity of finished goods on hand, plus those held at private or public warehouses by the manufacturers who own the goods.

Products

Sheets. Excludes bedsheeting fabric used for bedspreads, shower curtains, tablecloths, piece goods, etc.

Sheet Sets. Packages of at least two sheets and one pillowcase which may contain additional sheets, pillowcases, or other items.

Kitchen Accessories. Includes items such as terry cloth aprons, pot holders, dish cloths, and toaster covers.

Towel Blanks. Includes towels sold for further processing elsewhere. The figure reported for finished terry woven towels includes towel blanks; thus, both sets of data are not additive.

Types of Finish

Solids (Sheets). Includes solid color sheets with attached hems or piping.

Fancies. Towels include jacquards, mixed color or pattern weaves, prints, embroidered, and attached or embellished hems. Excludes solid color, white dobby, and white cam. Sheets include prints and solids with embroidery, lace, or other embellishments, except attached hems or piping.

Table 52. SUMMARY OF PRODUCTION OF SHEETS, PILLOWCASES, AND TERRY TOWELS: 1981 TO 1992

[1,000 dozens]

Year	Sheets			Pillowcases	Terry towels
	Crib	Flat	Fitted		
1992	675	8,303	6,220	12,523	48,789
1991	624	7,548	5,829	11,301	43,158
1990	618	8,476	6,314	12,665	42,376
1989	608	8,571	6,484	13,089	62,741
1988	539	8,773	6,193	12,564	47,179
1987	494	8,698	6,169	12,627	52,425
1986	520	8,610	5,923	12,372	50,182
1985	543	8,925	6,023	13,174	44,974
1984	653	10,149	6,324	15,147	46,954
1983 ¹	824	10,232	6,739	14,950	49,742
1982	642	8,937	5,908	12,382	41,117
1981	641	10,102	6,669	14,441	44,931

¹Data for 1983 include manufacturers of waterbed sheets which were not previously shown in the survey.

Table 53. INVENTORIES OF SHEETS, PILLOWCASES, AND TERRY TOWELS: 1990 TO 1992

[1,000 dozens]

Year and quarter	Sheets, flat and fitted ¹	Pillowcases	Terry towels
1992			
Fourth quarter	2,695	2,230	(D)
Third quarter	2,709	2,335	(D)
Second quarter	2,719	2,331	(D)
First quarter	2,870	2,101	(D)
1991			
Fourth quarter	2,570	2,192	(D)
Third quarter	2,568	2,280	(D)
Second quarter	2,466	2,231	(D)
First quarter	2,552	2,329	(D)
1990			
Fourth quarter	2,916	2,514	(D)
Third quarter	2,606	2,367	(D)
Second quarter	2,717	2,477	(D)
First quarter	2,348	2,101	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

¹Excludes crib sheets.

Table 54. SUMMARY OF UNFILLED ORDERS OF SHEETS, PILLOWCASES, AND TERRY TOWELS: 1990 TO 1992

[Thousands of dollars]

Year and quarter	Sheets, flat and fitted ¹	Pillowcases	Terry towels
1992			
Fourth quarter	97,732	31,617	(D)
Third quarter	121,341	36,419	(D)
Second quarter	142,337	45,582	(D)
First quarter	154,025	32,969	(D)
1991			
Fourth quarter	144,279	42,495	(D)
Third quarter	154,526	64,075	(D)
Second quarter	124,369	35,816	(D)
First quarter	110,192	32,128	(D)
1990			
Fourth quarter	123,883	35,697	(D)
Third quarter	146,118	39,563	(D)
Second quarter	133,995	35,530	(D)
First quarter	133,065	39,440	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

¹Excludes crib sheets.

Table 55. SUMMARY OF QUANTITY AND VALUE OF SHIPMENTS OF SHEETS, PILLOWCASES, AND TERRY TOWELS: 1990 TO 1992

[Quantity in 1,000 dozens; value in \$1,000]

Year and quarter	Sheets, flat and fitted ¹		Pillowcases		Terry towels	
	Quantity	Value	Quantity	Value	Quantity	Value
1992						
Fourth quarter	3,978	294,801	3,319	80,279	12,110	274,485
Third quarter	3,907	289,219	3,334	85,748	11,043	250,523
Second quarter	4,016	293,156	3,378	83,745	12,968	282,527
First quarter	3,399	251,946	2,914	72,532	10,764	245,507
1991						
Fourth quarter	3,964	296,583	3,319	83,508	11,888	271,908
Third quarter	3,800	284,764	3,094	79,290	11,218	254,129
Second quarter	3,636	266,083	3,094	75,659	11,029	245,884
First quarter	3,105	228,880	2,575	63,616	9,461	219,835
1990						
Fourth quarter	3,797	279,138	3,139	77,589	10,199	242,613
Third quarter	3,645	270,046	2,996	74,899	10,507	247,836
Second quarter	3,700	278,614	3,225	77,745	11,263	259,307
First quarter	3,574	260,892	3,083	75,214	9,886	218,573

¹Excludes crib sheets.

Table 56. PRODUCTION AND SHIPMENTS OF SHEETS, PILLOWCASES, AND TERRY TOWELS: 1992

[Production and shipments in 1,000 dozens; value in \$1,000]

Product description	Total			Fourth quarter			Third quarter			Second quarter			First quarter		
	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments
Sheets and pillowcases.....	28,111	28,918	1,478,463	7,265	7,458	381,438	7,088	7,423	382,226	7,002	7,567	383,845	6,756	6,470	330,954
Crib size sheets and pillow- cases.....	675	673	27,037	177	161	6,358	174	182	7,259	168	173	6,944	156	157	6,476
Sheets, excluding crib	14,908	15,300	1,129,122	3,874	3,978	294,801	3,729	3,907	289,219	3,713	4,016	293,156	3,592	3,399	251,946
By type:															
Flat sheets	8,303	8,457	629,499	2,180	2,239	166,474	2,094	2,141	159,963	2,067	2,207	163,843	1,962	1,870	139,219
Fitted sheets.....	6,220	6,369	468,758	1,606	1,620	121,034	1,552	1,653	122,222	1,551	1,671	121,703	1,511	1,425	103,799
Not specified by kind (n.s.k.)	385	474	30,865	88	119	7,293	83	113	7,034	95	138	7,610	119	104	8,928
By thread count:															
195 and over	1,948	1,529	178,569	542	352	43,303	511	390	45,451	422	403	46,582	473	384	43,233
180 to 194	8,247	8,248	617,450	2,182	2,123	159,533	2,069	2,118	157,342	2,028	2,239	166,424	1,968	1,768	134,151
135 to 179	726	769	48,408	214	229	14,677	168	179	10,717	176	182	11,771	168	179	11,243
125 to 134	1,425	1,847	114,255	408	507	31,535	331	425	26,780	360	491	29,781	326	424	26,159
Under 125	2,177	2,433	139,575	440	648	38,460	567	682	41,895	632	563	30,988	538	540	28,232
Not specified by kind (n.s.k.)	385	474	30,865	88	119	7,293	83	113	7,034	95	138	7,610	119	104	8,928
By fabric:															
Chiefly polyester blends with cotton	10,566	11,293	792,649	2,601	2,906	203,752	2,454	2,616	184,393	2,743	3,049	213,193	2,768	2,722	191,311
Cotton	4,193	3,927	328,194	1,225	1,043	88,205	1,236	1,273	102,922	950	954	78,590	782	697	58,477
All other	149	80	8,279	48	29	2,844	39	18	1,904	20	13	1,373	42	20	2,158
By size:															
King	(X)	1,751	188,973	(X)	440	48,309	(X)	424	46,795	(X)	473	49,922	(X)	414	43,947
Queen	(X)	3,268	310,614	(X)	841	81,251	(X)	842	80,523	(X)	858	79,997	(X)	727	68,843
Full	(X)	4,231	293,414	(X)	1,121	78,371	(X)	1,082	75,105	(X)	1,091	75,432	(X)	937	64,506
Twin	(X)	5,184	284,404	(X)	1,353	74,086	(X)	1,349	74,454	(X)	1,344	74,388	(X)	1,138	61,476
Single and smaller.....	(X)	392	20,852	(X)	104	5,491	(X)	97	5,308	(X)	112	5,807	(X)	79	4,246
(n.s.k.)	(X)	474	30,865	(X)	119	7,293	(X)	113	7,034	(X)	138	7,610	(X)	104	8,928
Flannel sheets	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Pillowcases, excluding crib size.....	12,528	12,945	322,304	3,214	3,319	80,279	3,185	3,334	85,748	3,121	3,378	83,745	3,008	2,914	72,532
By thread count:															
195 and over	1,746	1,450	66,597	468	350	15,933	446	365	17,012	406	383	17,711	426	352	15,941
180 to 194	7,103	7,234	180,200	1,884	1,829	44,519	1,819	1,904	48,196	1,717	1,922	47,480	1,683	1,579	40,005
135 to 179	503	527	7,719	146	150	2,075	121	114	1,711	117	123	1,843	119	140	2,090
125 to 134	1,033	1,396	23,199	271	359	5,661	240	319	5,490	272	380	6,447	250	338	5,601
Under 125	1,719	1,940	36,835	335	521	10,005	449	522	11,254	501	462	8,196	434	435	7,380
Not specified by kind (n.s.k.)	424	398	7,754	110	110	2,086	110	110	2,085	108	108	2,068	96	70	1,515
By fabric:															
Chiefly polyester blends with cotton	9,008	9,603	215,215	2,177	2,419	53,309	2,139	2,254	51,103	2,343	2,624	58,264	2,349	2,306	52,539
Cotton	3,353	3,228	104,383	990	865	26,126	999	1,052	33,948	750	731	24,988	614	580	19,321
All other.....	167	114	2,706	47	35	844	47	28	697	28	23	493	45	28	672
Flannel pillowcases.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table 57.

Table 56. PRODUCTION AND SHIPMENTS OF SHEETS, PILLOWCASES, AND TERRY TOWELS: 1992—Continued

[Production and shipments in 1,000 dozens; value in \$1,000]

Product description	Total			Fourth quarter			Third quarter			Second quarter			First quarter		
	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments
Branded retail shipments of sheets and pillowcases (except crib)	(X)	18,944	1,016,408	(X)	4,735	258,060	(X)	4,998	272,054	(X)	4,914	259,722	(X)	4,297	226,572
Upstairs brand	(X)	6,709	445,191	(X)	2,130	134,918	(X)	1,810	120,312	(X)	1,518	103,007	(X)	1,251	86,954
Open brand	(X)	12,235	571,217	(X)	2,605	123,142	(X)	3,188	151,742	(X)	3,396	156,715	(X)	3,046	139,618
Sheet sets, excluding water-bed sheet sets	(X)	3,067	571,892	(X)	748	140,520	(X)	803	149,500	(X)	862	157,976	(X)	654	123,896
Waterbed sheet sets	(X)	130	26,956	(X)	17	3,333	(X)	20	4,094	(X)	52	11,404	(X)	41	8,125
Finished terry towels ¹	48,789	46,885	1,053,042	12,217	12,110	274,485	12,195	11,043	250,523	12,150	12,968	282,527	12,227	10,764	245,507
By type:															
Sheared	8,788	8,288	124,565	1,824	1,905	28,342	2,134	1,876	29,879	2,437	2,582	36,767	2,393	1,925	29,577
Non-sheared	32,258	30,938	856,483	8,494	8,319	228,344	8,134	7,211	202,221	7,714	8,467	228,290	7,916	6,941	197,628
Not specified by kind (n.s.k.)	7,743	7,659	71,994	1,899	1,886	17,799	1,927	1,956	18,423	1,999	1,919	17,470	1,918	1,898	18,302
By end use:															
Kitchen	4,751	5,455	44,777	1,240	1,468	12,187	1,151	1,244	10,078	1,147	1,387	11,457	1,213	1,356	11,055
Bath	22,748	21,650	655,246	5,904	5,735	173,753	5,928	5,199	157,146	5,308	5,885	173,711	5,608	4,831	150,636
Hand, face, guest, and fingertip	18,124	16,628	250,280	4,290	4,091	64,969	4,349	3,857	59,291	4,842	4,877	69,199	4,643	3,803	56,821
Bath/tub mats	724	698	24,210	180	166	5,997	172	164	5,954	191	187	6,339	181	181	5,920
All other types, including larger than bath (queen/king size bath towels, bath sheets, beach towels, and bath mats)	2,442	2,454	78,529	603	650	17,579	595	579	18,054	662	632	21,821	582	593	21,075
Not specified by kind (n.s.k.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Terry towels sold for further processing elsewhere (e.g., blanks)	(X)	(D)	(D)	(X)	(D)	(D)	(X)	(D)	(D)	(X)	(D)	(D)	(X)	(D)	(D)
Terry washcloths	27,573	26,301	168,969	6,964	7,041	46,219	7,292	6,207	40,559	6,348	6,914	43,384	6,969	6,139	38,807
Branded retail shipments of towels and washcloths,	(X)	43,972	777,194	(X)	11,552	203,382	(X)	10,252	186,782	(X)	12,130	209,873	(X)	10,038	177,157
Upstairs brand	(X)	6,145	201,470	(X)	1,631	52,538	(X)	1,600	53,784	(X)	1,532	49,150	(X)	1,382	45,998
Open brand	(X)	37,827	575,724	(X)	9,921	150,844	(X)	8,652	132,998	(X)	10,598	160,723	(X)	8,656	131,159
Huck and crash towels	3,364	3,370	14,186	886	902	4,091	809	856	3,558	803	842	3,507	866	770	3,030
Other terry products:															
Terry cloth sold by the yard (thousands of linear yards) ¹	10,481	11,008	20,394	1,788	2,701	4,954	3,033	2,760	5,197	2,658	2,793	5,270	3,002	2,754	4,973
Pot holders, aprons, dishcloths, etc.	(X)	1,213	9,034	(X)	392	2,769	(X)	277	1,873	(X)	315	2,299	(X)	229	2,093

See footnotes at end of table 57.

Table 57. PRODUCTION AND SHIPMENTS OF SHEETS, PILLOWCASES, AND TERRY TOWELS: 1991

[Production and shipments in 1,000 dozens; value in \$1,000]

Product description	Total			Fourth quarter			Third quarter			Second quarter			First quarter		
	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments
Sheets and pillowcases.....	25,776	27,216	1,404,338	7,049	7,440	386,384	6,581	7,058	370,774	6,294	6,893	348,731	5,852	5,825	298,449
Crib size sheets and pillow- cases.....	624	629	25,955	168	157	6,293	160	164	6,720	155	163	6,989	141	145	5,953
Sheets, excluding crib	13,851	14,505	1,076,310	3,838	3,964	296,583	3,530	3,800	284,764	3,360	3,636	266,083	3,123	3,105	228,880
By type:															
Flat sheets	7,548	7,934	594,478	2,058	2,160	163,348	1,926	2,050	154,977	1,844	2,013	148,752	1,720	1,711	127,401
Fitted sheets.....	5,829	6,103	446,221	1,656	1,682	123,692	1,483	1,631	120,900	1,402	1,510	108,668	1,288	1,280	92,961
Not specified by kind (n.s.k.)	474	468	35,611	124	122	9,543	121	119	8,887	114	113	8,663	115	114	8,518
By thread count:															
195 and over	1,726	1,632	183,363	469	436	48,736	415	399	46,546	418	449	48,181	424	348	39,900
180 to 194	7,063	7,274	552,837	1,978	1,992	152,191	1,803	1,914	145,357	1,650	1,851	139,419	1,632	1,517	115,870
135 to 179	805	820	53,736	191	213	14,134	224	195	13,264	234	204	13,136	156	208	13,202
125 to 134	1,371	1,761	109,429	368	488	30,348	375	470	29,478	353	438	26,472	275	365	23,131
Under 125.....	2,412	2,550	141,334	708	713	41,631	592	703	41,232	591	581	30,212	521	553	28,259
Not specified by kind (n.s.k.)	474	468	35,611	124	122	9,543	121	119	8,887	114	113	8,663	115	114	8,518
By fabric:															
Chiefly polyester blends with cotton	10,465	10,894	780,592	2,916	2,885	208,457	2,653	2,833	204,511	2,530	2,757	195,186	2,366	2,419	172,438
Cotton	3,272	3,537	286,370	895	1,062	86,272	843	947	78,378	803	858	68,925	731	670	54,795
All other.....	114	74	7,348	27	17	1,854	34	20	1,875	27	21	1,972	26	16	1,647
By size:															
King	(X)	1,652	179,382	(X)	445	47,464	(X)	439	47,997	(X)	399	42,774	(X)	369	41,147
Queen	(X)	3,195	296,557	(X)	894	83,783	(X)	837	78,667	(X)	770	71,686	(X)	694	62,421
Full	(X)	3,941	270,201	(X)	1,073	75,328	(X)	1,034	72,746	(X)	997	68,554	(X)	837	53,573
Twin	(X)	4,906	275,567	(X)	1,335	75,241	(X)	1,293	72,102	(X)	1,271	69,558	(X)	1,007	58,666
Single and smaller.....	(X)	343	18,992	(X)	95	5,224	(X)	78	4,365	(X)	86	4,848	(X)	84	4,555
Not specified by kind (n.s.k.)	(X)	468	35,611	(X)	122	9,543	(X)	119	8,887	(X)	113	8,663	(X)	114	8,518
Flannel sheets.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Pillowcases, excluding crib size.....	11,301	12,082	302,073	3,043	3,319	83,508	2,891	3,094	79,290	2,779	3,094	75,659	2,588	2,575	63,616
By thread count:															
195 and over	1,513	1,459	65,337	426	398	17,962	355	357	16,655	363	396	16,729	369	308	13,991
180 to 194	5,948	6,335	160,048	1,570	1,728	43,358	1,554	1,619	41,399	1,421	1,653	41,395	1,403	1,335	33,896
135 to 179	561	571	10,091	143	159	2,760	156	140	2,459	168	145	2,497	94	127	2,375
125 to 134	1,062	1,371	22,728	274	386	6,502	301	374	6,224	274	338	5,557	213	273	4,445
Under 125.....	1,862	1,991	37,041	516	534	10,799	444	523	10,978	472	481	7,908	430	453	7,356
Not specified by kind (n.s.k.)	355	355	6,828	114	114	2,127	81	81	1,575	81	81	1,573	79	79	1,553
By fabric:															
Chiefly polyester blends with cotton	8,521	8,937	203,811	2,255	2,352	53,508	2,182	2,282	52,809	2,132	2,329	52,476	1,952	1,974	45,018
Cotton	2,665	3,070	95,997	752	941	29,365	680	795	25,928	623	748	22,604	610	586	18,100
All other.....	115	75	2,265	36	26	635	29	17	553	24	17	579	26	15	498
Flannel pillowcases.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 57. PRODUCTION AND SHIPMENTS OF SHEETS, PILLOWCASES, AND TERRY TOWELS: 1991—Continued

[Production and shipments in 1,000 dozens; value in \$1,000]

Product description	Total			Fourth quarter			Third quarter			Second quarter			First quarter		
	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments	Produc- tion	Ship- ments	Value of ship- ments
Branded retail shipments of sheets and pillowcases (except crib)	(X)	18,259	964,658	(X)	5,039	264,070	(X)	4,698	255,527	(X)	4,499	234,638	(X)	4,023	210,423
Upstairs brand	(X)	5,609	381,541	(X)	1,622	108,065	(X)	1,365	96,998	(X)	1,353	92,037	(X)	1,269	84,441
Open brand	(X)	12,650	583,117	(X)	3,417	156,005	(X)	3,333	158,529	(X)	3,146	142,601	(X)	2,754	125,982
Sheet sets, excluding waterbed sheet sets	(X)	3,040	558,747	(X)	877	162,867	(X)	748	138,523	(X)	706	127,340	(X)	709	130,017
Waterbed sheet sets	(X)	132	31,624	(X)	37	7,794	(X)	33	7,592	(X)	32	8,724	(X)	30	7,514
Finished terry towels ¹	43,158	43,596	991,756	11,208	11,888	271,908	11,190	11,218	254,129	10,706	11,029	245,884	10,054	9,461	219,835
By type:															
Sheared	9,214	9,132	139,773	2,247	2,477	37,871	2,322	2,292	35,165	2,481	2,423	34,240	2,164	1,940	32,497
Nonsheared	27,934	28,525	792,843	7,072	7,566	216,787	7,202	7,260	203,542	7,001	7,381	198,284	6,659	6,318	174,230
Not specified by kind (n.s.k.)	6,010	5,939	59,140	1,889	1,845	17,250	1,666	1,666	15,422	1,224	1,225	13,360	1,231	1,203	13,108
By end use:															
Kitchen	4,674	4,731	42,413	1,311	1,627	12,876	1,308	1,179	9,748	1,072	1,013	9,931	983	912	9,858
Bath	19,709	19,753	612,848	4,989	5,333	170,392	4,849	4,986	159,103	5,001	5,071	149,965	4,870	4,363	133,388
Hand, face, guest, and fingertip	16,590	16,600	240,354	4,257	4,242	65,483	4,397	4,345	61,770	4,184	4,383	59,625	3,752	3,630	53,476
Bath/tub mats	679	719	24,033	168	189	6,311	148	170	5,977	181	180	6,353	182	180	5,392
All other types, including larger than bath (queen/king size bath towels, bath sheets, beach towels, and bath mats)	1,506	1,793	72,108	483	497	16,846	488	538	17,531	268	382	20,010	267	376	17,721
Not specified by kind (n.s.k.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Terry towels sold for further processing elsewhere (e.g., blanks)	(X)	26,564	169,080	(X)	7,216	45,436	(X)	6,252	41,701	(X)	6,551	43,624	(X)	5,691	38,319
Terry washcloths	(X)	43,638	751,476	(X)	11,751	200,089	(X)	10,591	184,288	(X)	11,446	190,503	(X)	9,850	176,596
Branded retail shipments of towels and washcloths	(X)	6,211	198,094	(X)	1,562	51,259	(X)	1,593	50,445	(X)	1,651	50,626	(X)	1,405	45,764
Upstairs brand	(X)	37,427	553,382	(X)	10,189	148,830	(X)	8,998	133,843	(X)	9,795	139,877	(X)	8,445	130,832
Open brand	3,674	3,784	14,518	776	774	2,898	935	991	3,454	1,040	1,010	4,080	923	1,009	4,086
Huck and crash towels															
Other terry products:															
Terry cloth sold by the yard (thousands of linear yards)	11,177	11,404	22,559	2,672	2,964	5,315	2,618	2,509	5,327	2,657	2,860	5,741	3,230	3,071	6,176
Pot holders, aprons, dishcloths, etc	(X)	1,922	13,852	(X)	518	3,059	(X)	366	2,368	(X)	507	3,937	(X)	531	4,488

- Represents zero.

(D) Data withheld to avoid disclosing figures for individual companies.

(X) Not applicable.

¹To the extent that terry cloth yard goods are fabricated into towels and washcloths, duplication exists in the production of these items.

Table 58. QUANTITY AND VALUE OF SHIPMENTS OF SHEETS, PILLOWCASES, AND TERRY TOWELS, BY DISTRIBUTION CHANNEL: 1992

[Quantity in 1,000 dozens; value in \$1,000]

Product description	Total shipments		Branded retail		Private ticket retail		Export		Institutional and other		Total n.s.k. shipments	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
TOTAL												
Sheets, flat and fitted (except crib)	15,300	1,129,122	10,136	780,284	1,630	133,073	822	53,641	2,238	131,259	474	30,865
Less than 180 count.	5,049	302,238	3,122	190,100	360	25,935	396	23,902	1,171	62,301	-	-
180 count and greater	9,777	796,019	7,014	590,184	1,270	107,138	426	29,739	1,067	68,958	-	-
Not specified by kind (n.s.k.) .	474	30,865	-	-	-	-	-	-	-	-	474	30,865
Pillowcases (except crib)	12,945	322,304	8,808	236,124	1,487	33,895	462	12,157	1,790	32,374	398	7,754
Less than 180 count.	3,863	67,753	2,705	46,147	327	4,566	287	6,222	544	10,818	-	-
180 count and greater	8,684	246,797	6,103	189,977	1,160	29,329	175	5,935	1,246	21,556	-	-
Not specified by kind (n.s.k.) .	398	7,754	-	-	-	-	-	-	-	-	398	7,754
Terry towels	46,885	1,053,042	27,208	662,103	3,890	131,428	643	22,013	7,485	165,504	7,659	71,994
Washcloths, terry	26,301	168,969	16,764	115,091	2,289	16,987	174	2,228	5,149	25,616	1,925	9,047
FOURTH QUARTER												
Sheets, flat and fitted (except crib)	3,978	294,801	2,523	198,449	507	39,579	222	14,600	607	34,880	119	7,293
Less than 180 count.	1,384	84,672	770	49,908	152	9,850	116	6,916	346	17,998	-	-
180 count and greater	2,475	202,836	1,753	148,541	355	29,729	106	7,684	261	16,882	-	-
Not specified by kind (n.s.k.) .	119	7,293	-	-	-	-	-	-	-	-	119	7,293
Pillowcases (except crib)	3,319	80,279	2,212	59,611	428	7,692	113	3,243	456	7,647	110	2,086
Less than 180 count.	1,030	17,741	704	12,243	119	1,314	74	1,770	133	2,414	-	-
180 count and greater	2,179	60,452	1,508	47,368	309	6,378	39	1,473	323	5,233	-	-
Not specified by kind (n.s.k.) .	110	2,086	-	-	-	-	-	-	-	-	110	2,086
Terry towels	12,110	274,485	7,024	171,810	1,091	36,075	191	6,955	1,918	41,846	1,886	17,799
Washcloths, terry	7,041	46,219	4,528	31,572	640	4,643	66	731	1,405	6,913	402	2,360
THIRD QUARTER												
Sheets, flat and fitted (except crib)	3,907	289,219	2,695	207,749	374	31,172	234	14,749	491	28,515	113	7,034
Less than 180 count.	1,286	79,392	832	51,866	82	7,002	122	6,864	250	13,660	-	-
180 count and greater	2,508	202,793	1,863	155,883	292	24,170	112	7,885	241	14,855	-	-
Not specified by kind (n.s.k.) .	113	7,034	-	-	-	-	-	-	-	-	113	7,034
Pillowcases (except crib)	3,334	85,748	2,303	64,305	346	8,599	119	2,764	456	7,995	110	2,085
Less than 180 count.	955	18,455	658	12,788	70	1,499	85	1,642	142	2,526	-	-
180 count and greater	2,269	65,208	1,645	51,517	276	7,100	34	1,122	314	5,469	-	-
Not specified by kind (n.s.k.) .	110	2,085	-	-	-	-	-	-	-	-	110	2,085
Towels	11,043	250,523	6,355	158,990	822	28,821	140	4,723	1,770	39,566	1,956	18,423
Washcloths, terry	6,207	40,559	3,897	27,792	518	3,717	28	417	1,251	6,374	513	2,259
SECOND QUARTER												
Sheets, flat and fitted (except crib)	4,016	293,156	2,625	199,238	434	33,929	228	15,813	591	36,566	138	7,610
Less than 180 count.	1,236	72,540	783	44,871	88	5,842	95	5,946	270	15,881	-	-
180 count and greater	2,642	213,006	1,842	154,367	346	28,087	133	9,867	321	20,685	-	-
Not specified by kind (n.s.k.) .	138	7,610	-	-	-	-	-	-	-	-	138	7,610
Pillowcases (except crib)	3,378	83,745	2,289	60,484	399	9,461	105	2,894	477	8,838	108	2,068
Less than 180 count.	965	16,486	672	10,913	93	1,341	54	1,196	146	3,036	-	-
180 count and greater	2,305	65,191	1,617	49,571	306	8,120	51	1,698	331	5,802	-	-
Not specified by kind (n.s.k.) .	108	2,068	-	-	-	-	-	-	-	-	108	2,068
Terry towels	12,968	282,527	7,753	180,358	993	33,185	180	5,738	2,123	45,776	1,919	17,470
Washcloths, terry	6,914	43,384	4,377	29,515	584	4,332	36	587	1,396	6,575	521	2,375
FIRST QUARTER												
Sheets, flat and fitted (except crib)	3,399	251,946	2,293	174,848	315	28,393	138	8,479	549	31,298	104	8,928
Less than 180 count.	1,143	65,634	737	43,455	38	3,241	63	4,176	305	14,762	-	-
180 count and greater	2,152	177,384	1,556	131,393	277	25,152	75	4,303	244	16,536	-	-
Not specified by kind (n.s.k.) .	104	8,928	-	-	-	-	-	-	-	-	104	8,928
Pillowcases (except crib)	2,914	72,532	2,004	51,724	314	8,143	125	3,256	401	7,894	70	1,515
Less than 180 count.	913	15,071	671	10,203	45	412	74	1,614	123	2,842	-	-
180 count and greater	1,931	55,946	1,333	41,521	269	7,731	51	1,642	278	5,052	-	-
Not specified by kind (n.s.k.) .	70	1,515	-	-	-	-	-	-	-	-	70	1,515
Terry towels	10,764	245,507	6,076	150,945	984	33,347	132	4,597	1,674	38,316	1,898	18,302
Washcloths, terry	6,139	38,807	3,962	26,212	547	4,295	44	493	1,097	5,754	489	2,053

See footnotes at end of table 59.

Table 59. **QUANTITY AND VALUE OF SHIPMENTS OF SHEETS, PILLOWCASES, AND TERRY TOWELS, BY TYPE AND FINISH: 1992**

[Quantity in 1,000 dozens; value in \$1,000]

Product description	Total shipments		White		Solid colors		Fancies		Total n.s.k. shipments	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
TOTAL										
Sheets, flat and fitted (except crib)	15,300	1,129,122	2,008	134,566	4,212	306,895	8,606	656,796	474	30,865
Less than 180 count	5,049	302,238	578	31,450	1,060	56,326	3,411	214,462	-	-
180 count and greater	9,777	796,019	1,430	103,116	3,152	250,569	5,195	442,334	-	-
Not specified by kind (n.s.k.) ..	474	30,865	-	-	-	-	-	-	474	30,865
Pillowcases (except crib)	12,945	322,304	1,798	34,336	3,653	98,533	7,096	181,681	398	7,754
Less than 180 count	3,863	67,753	457	6,997	747	14,471	2,659	46,285	-	-
180 count and greater	8,684	246,797	1,341	27,339	2,906	84,062	4,437	135,396	-	-
Not specified by kind (n.s.k.) ..	398	7,754	-	-	-	-	-	-	398	7,754
Terry towels	46,885	1,053,042	10,181	175,430	19,390	573,660	9,655	231,958	7,659	71,994
Washcloths, terry	26,301	168,969	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
FOURTH QUARTER										
Sheets, flat and fitted (except crib)	3,978	294,801	532	34,461	1,089	80,519	2,238	172,528	119	7,293
Less than 180 count	1,384	84,672	149	8,125	264	14,270	971	62,277	-	-
180 count and greater	2,475	202,836	383	26,336	825	66,249	1,267	110,251	-	-
Not specified by kind (n.s.k.) ..	119	7,293	-	-	-	-	-	-	119	7,293
Pillowcases (except crib)	3,319	80,279	472	8,379	922	24,146	1,815	45,668	110	2,086
Less than 180 count	1,030	17,741	109	1,642	202	3,645	719	12,454	-	-
180 count and greater	2,179	60,452	363	6,737	720	20,501	1,096	33,214	-	-
Not specified by kind (n.s.k.) ..	110	2,086	-	-	-	-	-	-	110	2,086
Terry towels	12,110	274,485	2,671	45,265	4,995	150,892	2,558	60,529	1,886	17,799
Washcloths, terry	7,041	46,219	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
THIRD QUARTER										
Sheets, flat and fitted (except crib)	3,907	289,219	493	33,912	1,128	82,660	2,173	165,613	113	7,034
Less than 180 count	1,286	79,392	138	7,683	297	16,651	851	55,058	-	-
180 count and greater	2,508	202,793	355	26,229	831	66,009	1,322	110,555	-	-
Not specified by kind (n.s.k.) ..	113	7,034	-	-	-	-	-	-	113	7,034
Pillowcases (except crib)	3,334	85,748	465	9,330	982	27,209	1,777	47,124	110	2,085
Less than 180 count	955	18,455	120	1,931	184	4,169	651	12,355	-	-
180 count and greater	2,269	65,208	345	7,399	798	23,040	1,126	34,769	-	-
Not specified by kind (n.s.k.) ..	110	2,085	-	-	-	-	-	-	110	2,085
Towels	11,043	250,523	2,449	41,779	4,656	138,790	1,982	51,531	1,956	18,423
Washcloths, terry	6,207	40,559	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
SECOND QUARTER										
Sheets, flat and fitted (except crib)	4,016	293,156	553	37,148	1,071	78,453	2,254	169,945	138	7,610
Less than 180 count	1,236	72,540	151	8,177	243	13,208	842	51,155	-	-
180 count and greater	2,642	213,006	402	28,971	828	65,245	1,412	118,790	-	-
Not specified by kind (n.s.k.) ..	138	7,610	-	-	-	-	-	-	138	7,610
Pillowcases (except crib)	3,378	83,745	465	8,981	928	25,222	1,877	47,474	108	2,068
Less than 180 count	965	16,486	119	1,804	165	3,190	681	11,492	-	-
180 count and greater	2,305	65,191	346	7,177	763	22,032	1,196	35,982	-	-
Not specified by kind (n.s.k.) ..	108	2,068	-	-	-	-	-	-	108	2,068
Terry towels	12,968	282,527	2,951	49,502	5,323	150,257	2,775	65,298	1,919	17,470
Washcloths, terry	6,914	43,384	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
FIRST QUARTER										
Sheets, flat and fitted (except crib)	3,399	251,946	430	29,045	924	65,263	1,941	148,710	104	8,928
Less than 180 count	1,143	65,634	140	7,465	256	12,197	747	45,972	-	-
180 count and greater	2,152	177,384	290	21,580	668	53,066	1,194	102,738	-	-
Not specified by kind (n.s.k.) ..	104	8,928	-	-	-	-	-	-	104	8,928
Pillowcases (except crib)	2,914	72,532	396	7,646	821	21,956	1,627	41,415	70	1,515
Less than 180 count	913	15,071	109	1,620	196	3,467	608	9,984	-	-
180 count and greater	1,931	55,946	287	6,026	625	18,489	1,019	31,431	-	-
Not specified by kind (n.s.k.) ..	70	1,515	-	-	-	-	-	-	70	1,515
Terry towels	10,764	245,507	2,110	38,884	4,416	133,721	2,340	54,600	1,898	18,302
Washcloths, terry	6,139	38,807	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)

- Represents zero. (X) Not applicable. n.s.k. Not specified by kind.

Table 60. QUANTITY AND VALUE OF SHIPMENTS OF SHEETS, PILLOWCASES, AND TERRY TOWELS, BY DISTRIBUTION CHANNEL: 1991

[Quantity in 1,000 dozens; value in \$1,000]

Product description	Total shipments		Branded retail		Private ticket retail		Export		Institutional and other		Total n.s.k. shipments	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
TOTAL												
Sheets, flat and fitted (except crib)	14,505	1,076,310	9,899	746,813	1,458	129,093	667	42,424	2,013	122,369	468	35,611
Less than 180 count.	5,131	304,499	3,349	198,529	350	24,395	368	22,655	1,064	58,920	-	-
180 count and greater	8,906	736,200	6,550	548,284	1,108	104,698	299	19,769	949	63,449	-	-
Not specified by kind (n.s.k.) ..	468	35,611	-	-	-	-	-	-	-	-	468	35,611
Pillowcases (except crib)	12,082	302,073	8,360	217,845	1,352	35,550	505	13,297	1,510	28,553	355	6,828
Less than 180 count.	3,933	69,860	2,820	47,037	295	5,149	318	7,053	500	10,621	-	-
180 count and greater	7,794	225,385	5,540	170,808	1,057	30,401	187	6,244	1,010	17,932	-	-
Not specified by kind (n.s.k.) ..	355	6,828	-	-	-	-	-	-	-	-	355	6,828
Terry towels	43,596	991,756	26,714	635,396	3,429	116,636	701	23,549	6,813	157,035	5,939	59,140
Washcloths, terry.	26,284	169,080	16,924	116,080	1,986	15,657	213	2,473	4,901	24,580	2,260	10,290
FOURTH QUARTER												
Sheets, flat and fitted (except crib)	3,964	296,583	2,755	205,605	369	39,658	196	13,530	522	28,247	122	9,543
Less than 180 count.	1,414	86,113	916	57,870	99	7,848	110	6,921	289	13,474	-	-
180 count and greater	2,428	200,927	1,839	147,735	270	31,810	86	6,609	233	14,773	-	-
Not specified by kind (n.s.k.) ..	122	9,543	-	-	-	-	-	-	-	-	122	9,543
Pillowcases (except crib)	3,319	83,508	2,284	58,465	395	11,097	156	4,207	370	7,612	114	2,127
Less than 180 count.	1,079	20,061	765	13,326	86	1,413	99	2,172	129	3,150	-	-
180 count and greater	2,126	61,320	1,519	45,139	309	9,684	57	2,035	241	4,462	-	-
Not specified by kind (n.s.k.) ..	114	2,127	-	-	-	-	-	-	-	-	114	2,127
Terry towels	11,888	271,908	7,021	168,941	1,121	38,541	194	6,331	1,707	40,845	1,845	17,250
Washcloths, terry.	7,216	45,436	4,730	31,148	628	4,751	47	681	1,253	6,468	558	2,388
THIRD QUARTER												
Sheets, flat and fitted (except crib)	3,800	284,764	2,574	198,169	433	35,457	163	9,659	511	32,592	119	8,887
Less than 180 count.	1,368	83,974	884	54,410	128	7,597	91	5,133	265	16,834	-	-
180 count and greater	2,313	191,903	1,690	143,759	305	27,860	72	4,526	246	15,758	-	-
Not specified by kind (n.s.k.) ..	119	8,887	-	-	-	-	-	-	-	-	119	8,887
Pillowcases (except crib)	3,094	79,290	2,124	57,358	372	9,690	117	2,959	400	7,708	81	1,575
Less than 180 count.	1,037	19,661	724	13,070	111	2,049	73	1,533	129	3,009	-	-
180 count and greater	1,976	58,054	1,400	44,288	261	7,641	44	1,426	271	4,699	-	-
Not specified by kind (n.s.k.) ..	81	1,575	-	-	-	-	-	-	-	-	81	1,575
Terry towels	11,218	254,129	6,555	156,395	1,051	35,836	149	5,161	1,797	41,315	1,666	15,422
Washcloths, terry.	6,496	41,701	4,036	27,893	553	4,349	48	620	1,267	6,354	592	2,485
SECOND QUARTER												
Sheets, flat and fitted (except crib)	3,636	266,083	2,397	180,940	378	31,524	179	10,981	569	33,975	113	8,663
Less than 180 count.	1,223	69,820	771	44,028	53	4,231	96	5,957	303	15,604	-	-
180 count and greater	2,300	187,600	1,626	136,912	325	27,293	83	5,024	266	18,371	-	-
Not specified by kind (n.s.k.) ..	113	8,663	-	-	-	-	-	-	-	-	113	8,663
Pillowcases (except crib)	3,094	75,659	2,102	53,698	345	8,441	139	3,645	427	8,302	81	1,573
Less than 180 count.	964	15,962	689	10,232	48	644	89	1,980	138	3,106	-	-
180 count and greater	2,049	58,124	1,413	43,466	297	7,797	50	1,665	289	5,196	-	-
Not specified by kind (n.s.k.) ..	81	1,573	-	-	-	-	-	-	-	-	81	1,573
Terry towels	11,029	245,884	6,992	160,958	660	22,276	242	7,908	1,910	41,382	1,225	13,360
Washcloths, terry.	6,881	43,624	4,454	29,545	426	3,625	90	821	1,347	6,886	564	2,747
FIRST QUARTER												
Sheets, flat and fitted (except crib)	3,105	228,880	2,173	162,099	278	22,454	129	8,254	411	27,555	114	8,518
Less than 180 count.	1,126	64,592	778	42,221	70	4,719	71	4,644	207	13,008	-	-
180 count and greater	1,865	155,770	1,395	119,878	208	17,735	58	3,610	204	14,547	-	-
Not specified by kind (n.s.k.) ..	114	8,518	-	-	-	-	-	-	-	-	114	8,518
Pillowcases (except crib)	2,575	63,616	1,850	48,324	240	6,322	93	2,486	313	4,931	79	1,553
Less than 180 count.	853	14,176	642	10,409	50	1,043	57	1,368	104	1,356	-	-
180 count and greater	1,643	47,887	1,208	37,915	190	5,279	36	1,118	209	3,575	-	-
Not specified by kind (n.s.k.) ..	79	1,553	-	-	-	-	-	-	-	-	79	1,553
Terry towels	9,461	219,835	6,146	149,102	597	19,983	116	4,149	1,399	33,493	1,203	13,108
Washcloths, terry.	5,691	38,319	3,704	27,494	379	2,932	28	351	1,034	4,872	546	2,670

See footnotes at end of table 61.

Table 61. QUANTITY AND VALUE OF SHIPMENTS OF SHEETS, PILLOWCASES, AND TERRY TOWELS, BY TYPE AND FINISH: 1991

[Quantity in 1,000 dozens; value in \$1,000]

Product description	Total shipments		White		Solid colors		Fancies		Total n.s.k. shipments	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
TOTAL										
Sheets, flat and fitted (except crib).....	14,505	1,076,310	1,820	122,943	4,020	295,154	8,197	622,602	468	35,611
Less than 180 count.....	5,131	304,499	620	32,891	1,300	69,121	3,211	202,487	-	-
180 count and greater.....	8,906	736,200	1,200	90,052	2,720	226,033	4,986	420,115	-	-
Not specified by kind (n.s.k.)...	468	35,611	-	-	-	-	-	-	468	35,611
Pillowcases (except crib).....	12,082	302,073	1,641	31,906	3,410	91,958	6,676	171,381	355	6,828
Less than 180 count.....	3,933	69,860	505	7,246	948	17,801	2,480	44,813	-	-
180 count and greater.....	7,794	225,385	1,136	24,660	2,462	74,157	4,196	126,568	-	-
Not specified by kind (n.s.k.)...	355	6,828	-	-	-	-	-	-	355	6,828
Terry towels.....	43,596	991,756	9,182	157,995	19,376	576,046	9,099	198,575	5,939	59,140
Washcloths, terry.....	26,284	169,080	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
FOURTH QUARTER										
Sheets, flat and fitted (except crib).....	3,964	296,583	448	30,804	1,181	85,976	2,213	170,260	122	9,543
Less than 180 count.....	1,414	86,113	141	7,537	388	21,420	885	57,156	-	-
180 count and greater.....	2,428	200,927	307	23,267	793	64,556	1,328	113,104	-	-
Not specified by kind (n.s.k.)...	122	9,543	-	-	-	-	-	-	122	9,543
Pillowcases (except crib).....	3,319	83,508	401	8,328	1,007	26,886	1,797	46,167	114	2,127
Less than 180 count.....	1,079	20,061	118	1,740	265	5,203	696	13,118	-	-
180 count and greater.....	2,126	61,320	283	6,588	742	21,683	1,101	33,049	-	-
Not specified by kind (n.s.k.)...	114	2,127	-	-	-	-	-	-	114	2,127
Terry towels.....	11,888	271,908	2,334	41,409	4,891	150,929	2,818	62,320	1,845	17,250
Washcloths, terry.....	7,216	45,436	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
THIRD QUARTER										
Sheets, flat and fitted (except crib).....	3,800	284,764	453	30,245	1,106	82,416	2,122	163,216	119	8,887
Less than 180 count.....	1,368	83,974	146	7,807	362	19,984	860	56,183	-	-
180 count and greater.....	2,313	191,903	307	22,438	744	62,432	1,262	107,033	-	-
Not specified by kind (n.s.k.)...	119	8,887	-	-	-	-	-	-	119	8,887
Pillowcases (except crib).....	3,094	79,290	411	7,791	911	25,465	1,691	44,459	81	1,575
Less than 180 count.....	1,037	19,661	121	1,683	263	5,268	653	12,710	-	-
180 count and greater.....	1,976	58,054	290	6,108	648	20,197	1,038	31,749	-	-
Not specified by kind (n.s.k.)...	81	1,575	-	-	-	-	-	-	81	1,575
Terry towels.....	11,218	254,129	2,240	40,192	5,035	146,506	2,277	52,009	1,666	15,422
Washcloths, terry.....	6,496	41,701	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
SECOND QUARTER										
Sheets, flat and fitted (except crib).....	3,636	266,083	512	34,254	965	69,614	2,046	153,552	113	8,663
Less than 180 count.....	1,223	69,820	183	9,645	304	15,098	736	45,077	-	-
180 count and greater.....	2,300	187,600	329	24,609	661	54,516	1,310	108,475	-	-
Not specified by kind (n.s.k.)...	113	8,663	-	-	-	-	-	-	113	8,663
Pillowcases (except crib).....	3,094	75,659	487	9,212	805	21,317	1,721	43,557	81	1,573
Less than 180 count.....	964	15,962	161	2,315	232	4,042	571	9,605	-	-
180 count and greater.....	2,049	58,124	326	6,897	573	17,275	1,150	33,952	-	-
Not specified by kind (n.s.k.)...	81	1,573	-	-	-	-	-	-	81	1,573
Terry towels.....	11,029	245,884	2,524	41,693	5,050	148,346	2,230	42,485	1,225	13,360
Washcloths, terry.....	6,881	43,624	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
FIRST QUARTER										
Sheets, flat and fitted (except crib).....	3,105	228,880	407	27,640	768	57,148	1,816	135,574	114	8,518
Less than 180 count.....	1,126	64,592	150	7,902	246	12,619	730	44,071	-	-
180 count and greater.....	1,865	155,770	257	19,738	522	44,529	1,086	91,503	-	-
Not specified by kind (n.s.k.)...	114	8,518	-	-	-	-	-	-	114	8,518
Pillowcases (except crib).....	2,575	63,616	342	6,575	687	18,290	1,467	37,198	79	1,553
Less than 180 count.....	853	14,176	105	1,508	188	3,288	560	9,380	-	-
180 count and greater.....	1,643	47,887	237	5,067	499	15,002	907	27,818	-	-
Not specified by kind (n.s.k.)...	79	1,553	-	-	-	-	-	-	79	1,553
Terry towels.....	9,461	219,835	2,084	34,701	4,400	130,265	1,774	41,761	1,203	13,106
Washcloths, terry.....	5,691	38,319	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)

- Represents zero. (X) Not applicable. n.s.k. Not specified by kind.

HISTORICAL NOTE

Data on sheets, pillowcases, and towels have been collected by the Bureau of the Census since 1960. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Karen Harshbarger, 301-763-4476 or Andrew Kraynak, 301-763-7108.

2.9 CARPET AND RUGS

INTRODUCTION

The data shown for carpet and rugs represent primary production and shipments of carpet and rugs. Data are not included for those rugs or carpet tiles which are cut from purchased roll goods. Data from those establishments that are dying and/or finishing carpets or rugs only are excluded

also. Data are shown for type of carpet or rug and for tufted roll goods, the fiber of the face yarn.

EXPLANATION OF TERMS

See explanation of terms at the beginning of this chapter.

Table 62. **SHIPMENTS OF CARPET AND RUGS: 1982 TO 1992**

[Millions of dollars]

Year	Rugs, carpet, and carpeting	Woven carpet and rugs	Tufted carpet and rugs	Other carpet and rugs
1992.....	8,711.8	300.2	8,130.1	281.5
1991.....	7,980.4	295.6	7,407.3	277.5
1990.....	8,527.1	293.2	7,977.5	256.4
1989.....	8,431.1	299.0	7,932.8	199.3
1988.....	8,417.3	286.3	7,891.3	239.7
1987.....	7,929.1	266.3	7,415.4	247.4
1986.....	7,311.6	240.2	6,890.0	181.4
1985.....	6,605.7	227.8	6,224.7	153.2
1984.....	6,461.5	215.6	6,088.2	157.7
1983.....	6,045.3	219.7	5,656.8	168.8
1982.....	4,960.8	194.7	4,621.1	145.0

Note: Detail may not add to total due to independent rounding.

¹Revised by 5 percent or more from previously published figures.

Table 63. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF CARPET AND RUGS: 1992 AND 1991**

[Quantity in millions of square meters; value and calculated import duty in millions of dollars]

Product code	Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Percent exports to manufacturers' shipments		Imports for consumption ²		Apparent consumption ⁴		Percent imports to apparent consumption	
		Quantity	Value	Quantity	Value at port	Quantity	Value	Quantity	Value ³	Quantity	Value	Quantity	Value
	1992												
	Carpet and rugs	1,175.2	8,711.8	106.3	724.6	9.0	8.3	63.7	791.5	1,132.6	8,778.7	5.6	9.0
22731	Woven carpet and rugs.	19.1	300.2	4.6	44.1	24.1	14.7	42.8	285.4	57.3	541.5	74.7	52.7
22732	Tufted carpet and rugs.	1,094.0	8,130.1	86.1	564.2	7.9	6.9	12.5	152.7	1,020.4	7,718.6	1.2	2.0
22733	Other carpet and rugs..	62.1	281.5	15.6	116.3	25.1	41.3	8.4	353.4	54.9	518.6	15.3	68.2
	1991												
	Carpet and rugs	1,068.4	7,980.4	103.7	697.7	9.7	8.7	48.5	656.7	1,013.2	7,939.4	4.8	8.3
22731	Woven carpet and rugs.	18.5	295.6	4.2	48.7	22.7	16.5	30.5	228.1	44.8	475.0	68.1	48.0
22732	Tufted carpet and rugs.	991.3	7,407.3	89.5	558.7	9.0	7.5	10.9	119.2	912.7	6,967.8	1.2	1.7
22733	Other carpet and rugs..	58.6	277.5	10.0	90.3	17.1	32.5	7.1	309.4	55.7	496.6	12.7	62.3

Note: For comparison of SIC-based codes with Schedule B export numbers and HTSUSA import numbers, see appendix B.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.

²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.

³This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus U.S. import duties.

⁴Apparent consumption is derived by subtracting exports from the total manufacturers' shipments plus imports.

Table 64. SHIPMENTS OF CARPET AND RUGS: 1992 AND 1991

[Quantity in thousands of square yards; value in thousands of dollars]

Product code	Product description	1992		1991	
		Quantity	Value	Quantity	Value
	Total	1,405,778	8,711,750	1,278,017	7,980,411
22731 00	Woven carpet and rugs	22,848	300,198	'22,113	'295,584
	By fiber of face yarn:				
22731 01	Cotton	-	-	-	-
22731 03	Manmade	14,769	194,061	14,410	193,025
22731 05	Wool	4,285	83,756	4,263	81,137
22731 07	Other	(D)	(D)	(D)	(D)
	Fiber n.s.k.	(D)	(D)	(D)	(D)
22732 20	Tufted carpet and rugs	1,308,650	8,130,101	1,185,807	7,407,305
	By type:				
22732 01	Scatter rugs, bathmats, and sets (rugs 6' x 9' and smaller)	61,148	429,565	'65,563	421,175
22732 03	Roll goods and rugs larger than 6' x 9', excluding artificial grass	1,166,721	7,181,445	1,043,416	6,541,620
22732 05	Tufted artificial grass for nonathletic surface	14,366	38,710	'19,336	'46,119
22732 07	Automobile and aircraft carpeting	66,415	480,381	57,492	398,391
	By fiber of face yarn:				
22732 11	Nylon	942,279	6,348,458	873,392	5,895,898
22732 13	Polyester	175,420	794,253	124,405	542,059
22732 17	Polypropylene	34,401	141,099	37,618	147,656
22732 19	All other	156,550	846,291	'150,392	'821,692
	Other carpet and rugs	74,280	281,451	'70,097	'277,522
22733 10	Knitted	(D)	(D)	(D)	(D)
22733 20	Needle punched	65,256	181,811	'60,249	'162,669
22733 30	Felt	-	-	-	-
22733 90	Braided, hooked, and other carpet and rugs, n.e.c.	(D)	(D)	(D)	(D)

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. n.e.c. Not elsewhere classified. n.s.k. Not specified by kind. 'Revised by 5 percent or more from previously published figures.

HISTORICAL NOTE

The annual MA22Q, Carpet and Rugs, was published for 6 years, 1962 to 1967. The semiannual, M22L, Tufted Textile Products, was initiated in 1951 and was published for 17 consecutive years. Both of these surveys were discontinued at the end of 1967 when the quarterly survey, MQ22Q, was established. The collection of data, on a quarterly basis, for this series began with the first quarter of 1968 and continued until 1985. (Also, for the years 1988 and

1989, the quarterly survey was conducted.) Since 1986, the series has been published as an annual, MA22Q, Carpet and Rugs. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Karen Harshbarger, 301-763-4476 or Keith Featherstone, 301-763-2553.

2.10 FOOTWEAR

INTRODUCTION

The "Footwear" series includes data on the production, quantity, and value of shipments for various types of footwear. Included in these data are footwear that are cut in the United States, exported for sewing, and imported under special tariff provisions number 9802.

These data are intended to represent domestic manufacturing. In some cases, domestic manufacturers who also import completed products have difficulty separating their shipment data. Every effort is made to ensure that the shipment data include only domestically manufactured footwear, but the data user should be aware that the shipment data could include some imported footwear.

SUMMARY OF FINDINGS

Nonrubber footwear production for 1992 totaled 164.9 million pairs, a 2.4-percent decrease from the 1991 production of 169.0 million pairs. Of the total 1992 production, 41.3 million pairs were men's, 1.1 million pairs were youth's and boys', 53.8 million were women's, 1.1 million were misses', and 4.9 million were children's shoes.

In 1992, 45.7 million pairs of slippers were produced, a 6.3-percent increase from the 1991 production of 43.0 million pairs.

EXPLANATION OF TERMS

Athletic Shoes. Includes skating shoes, shoes with cleats, and joggers whether for organized sports or street wear.

Footwear with Rubber or Plastic Soles/Fabric Uppers

Fabric Upper Espadrilles. Footwear with open toes or open heels, or of the slip on type, that is, held to the foot without the use of laces or buckles or other fasteners, except footwear having foxing or foxing-like band that is wholly or almost wholly of rubber or plastics applied or molded at the sole and overlapping the upper.

Fabric Upper Cement Process Shoes. Footwear having soles (or midsoles, if any) of rubber or plastics which are affixed to the upper exclusively with an adhesive (any midsoles also being affixed exclusively to one another and to the out sole with an adhesive), except footwear having a foxing or foxing-like band applied to or molded at the sole and overlapping the upper and except footwear with soles which overlap the upper other than the toe or heel.

Other Fabric Shoes. This includes all fabric shoes with rubber or plastic soles vulcanized or molded to a fabric upper, except slippers primarily intended for indoor household use, and sandals. Includes sneakers.

Men's Workshoes. Includes safety shoes with sole that is an inch or more thick.

Nonrubber Footwear. Includes shoes made by conventional processes, such as cemented, welt, and slip-lasted, and shoes with rubber sole vulcanized to leather uppers. Includes slippers, except slipper socks, regardless of material or construction. Excludes all other rubber or plastic boots and shoes, whether sold for over-the-foot wear or not.

Other Footwear, Except Footwear with Rubber or Plastic Soles/Fabric Uppers. Includes ballet and other theatrical shoes.

Protective Footwear. Boots, lumberman and PACS, arctics and gaiters, rubbers, and other footwear designed to be worn over, or in lieu of, other footwear as a protection against water, oil, grease, chemicals, or cold or inclement weather.

Boots. These are worn over the foot or over the sock and are normally worn for industrial, commercial, or sporting use, but boots for dress or commuter use are also included if they are over the sock and not over the shoe. No distinction is made to reflect varying processes of manufacture.

Lumberman and PACS. These are worn over the foot and are normally used for industrial, commercial, or sporting purposes. They include PACS, work shoes, and lumberman overs, with or without tops. No distinction is made to reflect varying processes of manufacture.

Arctics and Gaiters. These are worn over the shoes and are above ankle height, all weights, work and dress, with or without fasteners.

Light and Heavy Rubbers. These are worn over the shoe and are ankle height or below and include work and dress weights, with or without fasteners.

Protective Footwear With Fabric Upper. Boots, lumberman and PACS, and arctics and gaiters designed to be worn over, or in lieu of, other footwear as a protection against water, oil, grease, chemicals, or cold or inclement weather, having upper of more than 10 percent fabric.

Sizes

Men's shoes: sizes 6 and over, including big boys' shoes.

Youth's and boys' shoes: sizes 12-1/2 to 5-1/2.

Women's shoes: sizes 4 and over, including growing girls' shoes.

Misses' shoes: sizes 12-1/2 to 3-1/2.

Children's shoes: sizes 8-1/2 to 12, including little boys' shoes.

Infants shoes: sizes 0 to 8.

Slippers. Includes foldable and packable slippers.

Table 65. FOOTWEAR PRODUCTION: 1978 TO 1992

[Million pairs]

Year	Total	Nonrubber foot- wear	Rubber or plastic soles/fabric uppers	Rubber and plastic footwear
1992.....	275.8	164.9	94.8	16.1
1991.....	282.1	169.0	97.5	15.6
1990.....	290.3	184.6	89.7	16.0
1989.....	312.8	221.9	76.8	14.1
1988.....	325.3	234.8	76.7	13.8
1987.....	312.1	230.0	71.0	11.1
1986.....	310.9	240.9	57.9	12.1
1985.....	336.5	265.1	54.9	16.5
1984.....	383.5	303.2	62.8	17.5
1983.....	432.8	339.2	78.1	15.5
1982.....	465.9	359.1	92.9	13.9
1981.....	478.1	372.0	95.4	10.7
1980.....	498.3	386.3	97.5	14.5
1979.....	500.5	398.9	78.1	23.5
1978.....	522.6	418.9	79.3	24.4

Table 66. QUANTITY AND VALUE OF SHIPMENTS OF NONRUBBER FOOTWEAR: 1992 AND 1991

[Production and quantity in thousands of pairs; value in thousands of dollars]

Product description	1992			1991		
	Production	Quantity	Value	Production	Quantity	Value
Footwear (except rubber)	164,904	171,345	3,562,102	168,992	174,816	3,521,446
Shoes (except slippers)	119,212	123,430	3,312,098	126,029	130,731	3,264,255
Men's (except athletic)	41,270	42,797	1,791,263	40,936	43,291	1,771,495
Dress and casual	21,497	22,195	760,207	19,928	21,740	753,065
Boots, dress and casual (except western style)	958	966	40,785	1,064	1,050	43,147
Western style boots	6,814	7,074	454,007	6,362	6,282	385,792
Work oxfords	2,125	2,298	93,231	2,189	2,279	92,964
Workshoes, ankle height or higher	9,876	10,264	443,033	11,393	11,940	496,527
Youth's and boys' (except athletic)	1,126	1,190	22,904	807	818	10,736
Women's (except athletic)	53,816	56,164	1,247,421	55,942	58,002	1,206,427
Sandals	2,319	2,236	42,351	2,819	2,884	49,137
Dress and casual (except sandals)	47,942	50,443	1,019,889	50,216	52,238	1,006,710
Uniform duty shoes	126	125	3,511	191	210	6,162
Boots, ankle height or higher	3,429	3,360	181,670	2,716	2,670	144,418
Misses' shoes and boots (except athletic)	1,050	1,014	12,458	1,371	1,488	19,811
Children's shoes and boots (except athletic)	4,884	5,023	61,283	5,263	5,527	59,982
Infants' and babies'	9,353	9,383	58,564	11,162	10,991	64,700
Athletic	5,728	5,659	96,606	8,099	8,216	105,815
Men's	437	451	42,665	(NA)	(NA)	(NA)
Women's	175	179	24,498	(NA)	(NA)	(NA)
All Other	(D)	(D)	(D)	(NA)	(NA)	(NA)
Not specified by kind (n.s.k.)	(D)	(D)	(D)	(NA)	(NA)	(NA)
All other shoes (ballet, theatrical, etc.)	1,985	2,200	21,599	2,449	2,398	25,289
Slippers	45,692	47,915	250,004	42,963	44,085	257,191
Men's	6,176	6,187	54,354	6,675	6,735	49,743
Women's	33,049	35,203	174,321	33,286	34,221	189,490
All other	6,467	6,525	21,329	3,002	3,129	17,958

Note: Some companies are unable to exclude resales from their shipments' data.

(D) Data withheld to avoid disclosing figures for individual companies.

(NA) Not available.

n.s.k. Not specified by kind.

Table 67. PRODUCTION OF SHOES AND SLIPPERS: 1992 AND 1991

[Thousands of pairs]

Product description	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992					
Shoes and slippers.....As published	168,271	41,993	41,656	44,401	40,221
As revised	164,904	41,235	40,809	43,677	39,183
Shoes, including athletics.....As published	124,528	31,563	31,113	31,322	30,530
As revised	119,212	30,340	29,796	30,016	29,060
Men's shoes (except athletic).....As published	40,920	10,201	10,595	10,105	10,019
As revised	41,270	10,286	10,688	10,201	10,095
Work shoes.....As published	12,226	3,115	3,092	2,761	3,258
As revised	12,001	3,058	3,035	2,710	3,198
Shoes and boots (except work and athletic)....As published	28,694	7,086	7,503	7,344	6,761
As revised	29,269	7,228	7,653	7,491	6,897
Youths' and boys'.....As published	801	185	193	250	173
As revised	1,126	260	271	352	243
Womens'.....As published	57,288	14,417	13,768	15,016	14,087
As revised	53,816	13,543	12,934	14,106	13,233
Misses'.....As published	1,736	385	493	366	492
As revised	1,050	233	298	221	298
Children's.....As published	4,330	1,208	1,072	1,062	988
As revised	4,884	1,363	1,209	1,198	1,114
Infants and babies'.....As published	9,404	2,925	2,362	2,064	2,053
As revised	9,353	2,909	2,349	2,053	2,042
Athletic shoes.....As published	8,160	1,748	2,053	2,002	2,357
As revised	5,728	1,227	1,441	1,405	1,655
All other footwear.....As published	1,889	494	577	457	361
As revised	1,985	519	606	480	380
Slippers.....As published	43,743	10,430	10,543	13,079	9,691
As revised	45,692	10,895	11,013	13,661	10,123
1991					
Shoes and slippers.....As published	167,386	47,654	37,421	41,472	40,839
As revised	168,992	48,098	37,825	41,827	41,242
Shoes, including athletics.....As published	124,423	35,529	29,515	29,808	29,571
As revised	126,029	35,973	29,919	30,163	29,974
Men's shoes (except athletic).....As published	39,803	10,610	9,871	9,364	9,958
As revised	40,936	10,907	10,169	9,608	10,252
Work shoes.....As published	12,463	3,247	3,287	2,691	3,238
As revised	13,582	3,540	3,582	2,932	3,528
Shoes and boots (except work and athletic)....As published	27,340	7,363	6,584	6,673	6,720
As revised	27,354	7,367	6,587	6,676	6,724
Youths' and boys'.....As published	807	212	162	203	230
As revised	807	212	162	203	230
Womens'.....As published	55,455	17,225	12,575	13,014	12,641
As revised	55,942	17,376	12,685	13,128	12,753
Misses'.....As published	1,371	245	285	356	485
As revised	1,371	245	285	356	485
Children's.....As published	5,263	1,414	1,235	1,429	1,185
As revised	5,263	1,414	1,235	1,429	1,185
Infants and babies'.....As published	11,162	2,795	2,691	3,005	2,671
As revised	11,162	2,795	2,691	3,005	2,671
Athletic shoes.....As published	8,113	2,145	2,160	1,919	1,889
As revised	8,099	2,141	2,156	1,916	1,886
All other footwear.....As published	2,449	883	536	518	512
As revised	2,449	883	536	518	512
Slippers.....As published	42,963	12,125	7,906	11,664	11,268
As revised	42,963	12,125	7,906	11,664	11,268

Note: Detailed figures may not add to total due to independent rounding.

Table 68. **PRODUCTION OF NONRUBBER FOOTWEAR, BY STATE: 1992 AND 1991**

[Thousands of pairs]

State	Production	
	1992	1991
United States	164,904	168,992
Arkansas	8,936	8,892
California	2,766	1,370
Georgia	4,120	4,117
Illinois	1,474	1,876
Maine	22,170	'19,556
Massachusetts	5,941	6,629
Missouri	14,472	20,427
New Hampshire	4,513	4,537
New York	4,573	5,171
North Carolina	3,436	3,981
Ohio	1,516	2,006
Pennsylvania	15,206	16,847
Tennessee	11,680	12,028
Texas	27,432	24,312
Wisconsin	2,910	'3,941
All other states	33,759	'33,302

Note: Data for each state not shown separately have been withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously published figures.

Table 69. **QUANTITY AND VALUE OF SHIPMENTS OF SHOES AND SLIPPERS: 1992 AND 1991**

[Quantity in thousands of pairs; value in thousands of dollars]

Item	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992					
Quantity					
As published	176,785	40,661	38,116	46,670	51,338
As revised	171,345	39,410	36,943	45,234	49,758
Value					
As published	3,770,601	834,986	861,693	1,004,509	1,069,413
As revised	3,562,102	788,815	814,045	948,964	1,010,278
1991					
Quantity					
As published	172,905	42,561	37,595	46,023	46,726
As revised	174,816	43,031	38,010	46,534	47,241
Value					
As published	3,489,330	943,899	768,499	910,229	866,703
As revised	3,521,446	952,586	775,573	918,607	874,680

Table 70. PRODUCTION AND SHIPMENTS OF SHOES WITH RUBBER OR PLASTIC SOLES/FABRIC UPPERS: 1992 AND 1991

[Production and quantity in thousands of pairs; value in thousands of dollars]

Product description	1992			1991		
	Production	Shipments		Production	Shipments	
		Quantity	Value		Quantity	Value
Total.....	94,755	94,920	553,523	97,545	97,319	598,786
Athletic.....	25,465	27,019	214,853	(NA)	(NA)	(NA)
Men's.....	15,668	16,584	141,934	(NA)	(NA)	(NA)
Women's.....	1,586	1,783	29,186	(NA)	(NA)	(NA)
Other.....	8,211	8,652	43,733	(NA)	(NA)	(NA)
Non-Athletic.....	69,290	67,901	338,670	(NA)	(NA)	(NA)
Men's.....	26,946	25,974	103,902	(NA)	(NA)	(NA)
Women's.....	25,058	24,047	98,170	(NA)	(NA)	(NA)
Other.....	17,286	17,880	136,598	(NA)	(NA)	(NA)
Fabric upper espadrilles.....	(NA)	(NA)	(NA)	(D)	(D)	(D)
Fabric upper cement process.....	(NA)	(NA)	(NA)	2,931	2,978	97,824
Fabric upper vulcanized.....	(NA)	(NA)	(NA)	(D)	(D)	(D)
Fabric upper injection molded.....	(NA)	(NA)	(NA)	74,864	74,477	290,141
Fabric upper all other.....	(NA)	(NA)	(NA)	(D)	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

(NA) Not available.

Table 71. PRODUCTION AND SHIPMENTS OF RUBBER AND PLASTIC PROTECTIVE FOOTWEAR: 1992 AND 1991

[Production and quantity in thousands of pairs; value in thousands of dollars]

Product description	1992			1991		
	Production	Shipments		Production	Shipments	
		Quantity	Value		Quantity	Value
Total.....	16,117	15,665	223,821	15,639	16,146	202,699
Rubber upper protective footwear.....	7,258	7,213	119,914	8,362	8,821	128,171
Boots, lumberman, and PACS.....	3,570	3,426	79,532	(NA)	(NA)	(NA)
Boots.....	(NA)	(NA)	(NA)	3,580	4,242	63,808
Lumberman and PACS.....	(NA)	(NA)	(NA)	(D)	(D)	(D)
Arctics and gaiters, light and heavy rubbers...	3,688	3,787	40,382	(NA)	(NA)	(NA)
Arctics and gaiters.....	(NA)	(NA)	(NA)	(D)	(D)	(D)
Light and heavy rubbers.....	(NA)	(NA)	(NA)	2,093	2,151	16,472
Plastic or fabric protective footwear.....	8,859	8,452	103,907	(NA)	(NA)	(NA)
Slush molded.....	(D)	(D)	(D)	(NA)	(NA)	(NA)
Injection molded.....	4,213	3,676	29,420	(NA)	(NA)	(NA)
Other.....	(D)	(D)	(D)	(NA)	(NA)	(NA)
Plastic upper slush molded.....	(NA)	(NA)	(NA)	(D)	(D)	(D)
Plastic upper injection molded.....	(NA)	(NA)	(NA)	3,169	3,176	24,645
Plastic upper other.....	(NA)	(NA)	(NA)	(D)	(D)	(D)
Fabric upper rubber sole.....	(NA)	(NA)	(NA)	(D)	(D)	(D)
Fabric upper plastic sole.....	(NA)	(NA)	(NA)	(D)	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

(NA) Not available.

Table 72. PRODUCTION OF SHOES WITH RUBBER OR PLASTIC SOLES/FABRIC UPPERS AND RUBBER AND PLASTIC PROTECTIVE FOOTWEAR: BY QUARTER

[Thousands of pairs]

Product description	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992					
Shoes with rubber or plastic soles/fabric uppersAs published	89,452	29,436	26,008	15,108	18,900
As revised	94,755	31,180	27,550	16,004	20,021
Rubber and plastic protective footwearAs published	15,407	4,048	4,282	3,438	3,639
As revised	16,117	4,235	4,479	3,596	3,807
1991					
Shoes with rubber or plastic soles/fabric uppersAs published	97,545	22,955	26,044	22,390	26,156
As revised	97,545	22,955	26,044	22,390	26,156
Rubber and plastic protective footwearAs published	15,639	3,790	4,031	3,452	4,366
As revised	15,639	3,790	4,031	3,452	4,366

Table 73. PRODUCTION OF FOOTWEAR, BY TYPE OF UPPER AND TYPE OF SOLE: 1992 AND 1991

[Thousands of pairs]

Product description	1992	1991
Total	275,766	282,176
Rubber or plastic uppers and rubber or plastic soles, including rubber or plastic coated fabric uppers.	44,806	48,563
Waterproof	14,906	11,506
Made with steel safety toes	(D)	1,144
Boots (except with steel safety toes)	9,204	7,046
All other.	(D)	3,316
Not waterproof.	29,900	37,057
Athletic.	14,010	15,612
Made with cleats, spikes, sprigs, stops, etc.	-	-
Other	14,010	15,612
Made with steel safety toes	(D)	-
Boots (except with steel safety toes)	(D)	1,852
All other.	14,252	19,593
Leather uppers.	78,333	85,865
Athletic.	6,199	5,993
Made with cleats, spikes, sprigs, stops, etc.	431	440
Other	5,768	5,553
Leather soles	24,529	26,693
Made with steel safety toes	1,046	385
Boots (except with steel safety toes)	6,804	6,526
Shoes (except with steel safety toes)	16,679	19,782
Other soles.	47,605	53,179
Made with steel safety toes	4,038	4,614
Boots (except with steel safety toes)	8,816	7,236
Shoes (except with steel safety toes)	34,751	41,329
Fabric uppers.	116,974	112,650
Rubber or plastic soles	109,581	105,378
Athletic.	34,532	44,027
All other.	75,049	61,351
With all other soles	7,393	7,272
Footwear not specified by type of material	35,653	35,098

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

Table 74. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF FOOTWEAR: 1992

[Quantity in thousands of pairs; value in thousands of dollars]

Product description	Manufacturers' shipments ¹ (quantity)	Exports of domestic merchandise ²		Percent exports to domestic production	Imports for consumption ³		Apparent consumption ⁵	Percent imports to apparent consumption
		Quantity	Value		Quantity	Value ⁴		
Total.....	275,766	29,714	345,423	10.8	1,631,602	10,108,018	1,877,654	86.9
Rubber or plastic uppers and rubber or plastic soles, including rubber or plastic coated fabric uppers.....	44,806	6,238	41,530	13.9	451,877	2,426,475	490,445	92.1
Waterproof.....	14,906	761	8,100	5.1	32,244	48,927	46,389	69.5
Made with steel safety toes.....	(D)	211	2,778	(D)	26,595	569	(D)	(D)
Boots (except with steel safety toes).....	9,204	241	2,815	2.6	3,833	31,397	12,796	30.0
All other.....	(D)	309	2,507	(D)	1,816	16,961	(D)	(D)
Not waterproof.....	29,900	5,477	33,430	18.3	419,633	2,377,548	444,056	94.5
Athletic.....	14,010	1,163	12,428	8.3	49,354	412,745	62,201	79.3
Made with cleats, spikes, sprigs, stops, etc.....	(S)	628	5,348	(S)	12,193	200,126	(S)	(D)
Other.....	14,010	535	7,080	3.8	37,161	212,619	50,636	73.4
Made with steel safety toes.....	(D)	156	1,106	(D)	729	6,785	(D)	(D)
Boots (except with steel safety toes).....	(D)	521	3,746	(D)	61,766	647,291	(D)	(D)
All other.....	14,252	3,638	16,150	25.5	307,784	1,310,727	318,398	96.7
Leather uppers.....	78,333	12,072	189,918	15.4	500,444	6,213,462	566,705	88.3
Athletic.....	6,199	5,641	118,234	91.0	344,485	4,314,243	345,043	99.8
Made with cleats, spikes, sprigs, stops, etc.....	431	2,806	55,290	651.0	7,390	168,032	5,015	147.3
Other.....	5,768	⁶ 2,835	⁶ 62,944	49.2	⁶ 337,095	⁶ 4,146,211	340,028	99.1
Leather soles.....	24,529	4,651	23,516	19.0	41,232	23,516	61,110	67.5
Made with steel safety toes.....	1,046	⁷ 226	⁷ 9,098	21.6	⁷ 3,579	⁷ 71,794	4,399	81.4
Boots (except with steel safety toes).....	6,804	761	19,787	11.2	4,569	103,885	10,612	43.1
Shoes (except with steel safety toes).....	16,679	3,664	80,080	22.0	33,083	879,085	46,098	71.8
Other soles.....	47,605	1,780	48,168	3.7	114,727	1,875,703	160,552	71.5
Made with steel safety toes.....	4,038	-	-	(NA)	-	-	4,038	(NA)
Boots (except with steel safety toes).....	8,816	1,780	48,168	20.2	114,727	1,875,703	121,763	94.2
Shoes (except with steel safety toes).....	34,751	-	-	(NA)	-	-	34,751	(NA)
Fabric uppers.....	116,974	11,403	113,975	9.7	679,281	1,468,081	784,852	86.5
Rubber or plastic soles.....	109,581	9,150	99,383	8.4	268,023	1,301,616	368,454	72.7
Athletic.....	34,532	7,456	88,037	21.6	79,101	719,957	106,177	74.5
All other.....	75,049	1,694	11,346	2.3	188,922	581,659	262,277	72.0
With all other soles.....	7,393	2,253	14,592	30.5	411,258	166,465	416,398	98.8
Footwear not specified by type of material.....	35,653	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)

Note: For comparison of Standard Industrial Classification (SIC)-based product codes, Schedule B export numbers, and HTSUSA numbers, see appendix B.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

¹Represents shipments.

²Source: Bureau of the Census report EM 545, *U.S. Exports*.

³Source: Bureau of the Census report EM 145, *U.S. Imports for Consumption*.

⁴This dollar value represents the c.i.f. (cost, insurance, and freight) value at first port of entry in the United States, plus import duties.

⁵Apparent consumption is derived by subtracting exports from total production plus imports.

⁶Includes "Leather uppers, other soles, shoes (except with steel safety toes)."

⁷Includes "Leather uppers, other soles, made with steel safety toes."

Table 75. **PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF FOOTWEAR: 1991**

[Quantity in millions of pairs; value in millions of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ²		Percent exports to domestic production		Imports for consumption ³		Apparent consumption ⁵		Percent imports to apparent consumption	
	Quantity	Value ¹	Quantity	Value	Quantity	Value	Quantity	Value ⁴	Quantity	Value	Quantity	Value
Total footwear	288.2	4,322.9	19.1	404.6	12.1	20.4	1,120.0	10,250.1	1,389.1	14,168.4	80.6	72.3
Shoes slippers	174.8	3,521.4	17.0	360.8	9.4	10.3	739.0	8,315.4	896.8	11,476.0	82.4	72.5
Leather footwear	(NA)	(NA)	8.0	256.7	(NA)	(NA)	476.0	7,084.3	(NA)	(NA)	(NA)	(NA)
All other footwear	(NA)	(NA)	9.0	104.1	(NA)	(NA)	263.0	1,231.1	(NA)	(NA)	(NA)	(NA)
Footwear with rubber or plastic soles/fabric upper	97.3	598.8	2.0	35.2	2.1	5.9	376.0	1,874.5	471.3	2,438.1	79.8	76.9
Rubber and plastic protective footwear	16.1	202.7	0.1	8.6	0.6	4.2	5.0	60.2	21.0	254.3	23.8	23.7

Note: For comparison of Standard Industrial Classification (SIC)-based product codes, Schedule B export numbers, and HTSUSA numbers, see appendix B.

(NA) Not available.

¹Represents shipments.

²Source: Bureau of the Census report EM 545, *U. S. Exports*.

³Source: Bureau of the Census report EM 145, *U.S. Imports For Consumption*.

⁴This dollar value represents the c.i.f. (cost, insurance, and freight) value at first port of entry in the United States plus U.S. import duties.

⁵Apparent consumption is derived by subtracting exports from total production plus imports.

HISTORICAL NOTE

Data on footwear have been collected in this program since 1921. For some period, data were collected monthly, with a more comprehensive survey done annually. In 1991, due to budget reductions, the monthly program was canceled and replaced with a quarterly survey which collected similar data. Historical data may be obtained from Current

Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Nat Shelton, 301-763-5809.

Chapter 3. Building Materials

3.1 LUMBER PRODUCTION AND MILL STOCKS

INTRODUCTION

The Current Industrial Report on lumber production and mill stocks is a cut-off sample survey that canvasses approximately 3,000 establishments engaging in sawmill activity. Establishments are included in this survey even if the operation of the sawmill is a secondary activity. For example, a furniture manufacturer that manufactures the lumber they use to make furniture is considered as operating a sawmill and is in scope of this survey.

All sawmills producing lumber, sawed ties, and timbers, whether sawed for their own use, sawed on contract for others, custom sawed, or sawed for sale are considered in scope of this survey. All sawmills with 20 or more employees were included in the sample automatically. The remaining sawmills were selected by sampling these establishments based on quantity of lumber produced within each state and species.

Since the MA24T survey is a cut-off sample, the panel does not include the entire universe of lumber manufacturers. Therefore, to obtain estimates of total U.S. lumber production, it is necessary to increase the production figures from the survey panel to a universe level. This was done by applying a block estimate based on data reported by all establishments in the 1987 Census of Manufactures and the 1989 MA24T. The difference between them was then applied to the 1989 MA24T totals and then multiplied by the 1990 totals to obtain the 1990 block estimate. This block was then applied to the 1990 annual totals, by state and by species, resulting in the 1990 universe totals. For 1991 and 1992, this block estimate was carried forward by multiplying the rate of change for the survey panel by the prior years' block estimate, by state and by species. Therefore, these figures represent total production and inventories for all U.S. sawmills for 1991 and 1992.

SUMMARY OF FINDINGS

Production of lumber in the United States amounted to 40.8 billion board feet in 1992, 2.3 percent above the 1991 level of 39.9 billion board feet.

Eastern lumber production was 22.2 billion board feet in 1992. This is an increase of 6.6 percent above the 1991 level of 20.8 billion board feet. Southern yellow pine, which consists of 85.9 percent of all eastern softwoods, amounted

to 13.3 billion board feet in 1992, an increase of 8.2 percent over the 1991 production level. Production of Eastern hardwoods, at 6.6 billion board feet in 1992, was 4.1 percent above the 1991 level. Oak, red and white, the largest of the eastern hardwoods, showed a 3.6-percent increase of 2.5 billion board feet in 1992 over the 2.4 billion board feet produced in 1991.

Western lumber production was 18.7 billion board feet in 1992, a decrease of 2.3 percent from the 1991 production level of 19.1 billion board feet. The issue and debate over the protection of endangered species' forestland (especially the spotted owls') are the leading factors in the decline of western lumber production. Production of Western softwoods decreased in 1992 by 2.3 percent to 18.3 billion board feet. Douglas fir and Ponderosa pine, the largest species of Western softwoods, accounted for most of the 1992 Western softwood decline, decreasing by 3.7 percent to 10.7 billion board feet produced. Total Western hardwood production increased by 13.3 percent in 1992.

Total sawmill stocks showed a decrease of 11.5 percent to 3.5 billion board feet in 1992. Softwood stocks declined slightly more than hardwood stocks, decreasing 11.8 percent to 2.8 billion board feet in 1992.

EXPLANATION OF TERMS

Lumber. Timber sawed into beams, planks, boards, pallets, etc. of convenient sizes. Lumber is collected in this report in board feet. A board foot is a linear measure of lumber equal to a board one foot square and one inch thick.

Hardwood Lumber. Wood obtained from a class of trees known as angiosperms (having seeds produced within a closed pod). These trees are characterized by broad leaves and are usually deciduous in the temperate zones. Some examples of hardwood lumber include such trees as birch, maple, oak, gum, eucalyptus, cherry, and poplar.

Softwood Lumber. Wood from coniferous trees whose leaves are needle-like. Some examples of softwood trees are pine, spruce, hemlock, and cedar.

Eastern Hardwoods and Softwoods. Those species of trees that are grown and harvested in states considered part of the eastern United States.

Western Softwoods. Those species of trees that are grown and harvested in states considered part of the western United States.

LUMBER INDUSTRY REGIONS

Eastern Lumber Regions

Southern Pine:

All southern yellow pine.

Southern Hardwood:

All hardwoods in Missouri, Arkansas, Oklahoma, Texas, Louisiana, Mississippi, Alabama, Florida, Delaware, and the lowland counties of Maryland, Virginia, North Carolina, South Carolina, Georgia, Tennessee, and Kentucky.

Appalachian:

All hardwoods and softwoods, except southern yellow pine, in West Virginia, and Appalachian range counties of Maryland, Virginia, North Carolina, South Carolina, Georgia, Tennessee, and Kentucky.

Northern Hemlock and Hardwood:

All hardwoods and softwoods, except southern yellow pine, in Michigan and Wisconsin.

Other:

All hardwoods and softwoods in Minnesota, Ohio, Indiana, Illinois, Iowa, North Dakota, Nebraska, Kansas, District of Columbia, and New Jersey; and all

softwoods, except southern yellow pine, in Missouri, Delaware, Florida, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

Western Lumber Regions

Douglas Fir:

All softwoods and hardwoods in Washington and Oregon west of the Cascades, and in Jackson and Josephine counties in Oregon.

Western Pine:

All softwoods and hardwoods in Washington and Oregon east of the Cascades, in California (except the counties listed in the Redwood Region), and in Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, South Dakota, Utah, and Wyoming.

California Redwood:

All softwoods and hardwoods in the following 11 counties of California: Alameda, Contra Costa, Del Norte, Humboldt, Marin, Mendocino, Monterey, San Francisco, San Mateo, Santa Cruz, and Sonoma.

Alaska and Hawaii:

All softwoods and hardwoods in the States of Alaska and Hawaii have been included in the Lumber Industry Region tables of this publication to maintain consistency with the estimates shown for the total United States.

Table 1. PRODUCTION AND MILL STOCKS OF LUMBER: 1979 TO 1992

[Millions of board feet, lumber talley]

Year	Production					Mill Stocks		
	Total production	Softwoods			Total hardwoods	Total mill stocks	Softwoods	Hardwoods
		Total softwoods	Southern yellow pine	Other				
1992.....	40,832	33,783	13,332	20,451	7,049	3,477	2,805	672
1991.....	39,900	33,159	12,318	20,841	6,741	3,927	3,179	748
1990 NEW SAMPLE.....	43,466	36,224	12,989	23,235	7,242	4,194	3,402	792
1990 OLD SAMPLE.....	40,704	33,257	12,781	20,476	7,447	(NA)	(NA)	(NA)
1989.....	43,576	36,040	12,031	24,009	7,536	4,273	3,419	854
1988.....	44,576	36,845	12,474	24,371	7,731	4,540	3,611	929
1987.....	44,886	37,410	12,043	25,367	7,476	4,392	3,566	826
1986.....	41,999	34,815	11,443	23,372	7,184	4,584	3,679	905
1985.....	36,445	30,479	10,230	20,249	5,966	4,374	3,527	847
1984.....	37,065	30,801	10,648	20,153	6,264	4,327	3,403	924
1983.....	34,553	28,926	10,180	18,746	5,627	4,335	3,417	918
1982.....	30,010	24,949	8,754	16,195	5,061	3,833	2,981	852
1981.....	31,672	25,420	8,415	17,005	6,252	3,938	3,041	897
1980.....	35,354	28,239	8,217	20,022	7,115	5,033	3,831	1,202
1979.....	40,569	33,255	9,283	23,972	7,314	4,888	3,807	1,081

Note: 1990 represents the bridge year between the old and the new MA24T samples.

(NA) Not available.

Table 2. PRODUCTION OF SOFTWOODS AND HARDWOODS, BY STATE: 1992 AND 1991

[Millions of board feet, lumber talley]

Geographic area	Total		Softwoods		Hardwoods	
	1992	1991	1992	1991	1992	1991
United States	40,832	39,900	33,783	33,159	7,049	6,741
Eastern United States	22,167	20,796	15,528	14,417	6,639	6,379
Alabama	2,073	1,941	1,778	1,671	295	270
Arkansas	1,846	1,726	1,600	1,487	246	239
Connecticut and Rhode Island	41	46	1	2	40	44
Delaware and Maryland	150	139	63	61	87	78
Florida	577	'537	(D)	(D)	(D)	(D)
Georgia	2,760	2,427	2,525	2,205	235	222
Illinois	81	94	(D)	(D)	(D)	(D)
Indiana	192	'197	(D)	(D)	(D)	(D)
Iowa	37	'35	(Z)	(Z)	37	'35
Kansas and Nebraska	10	11	-	-	10	11
Kentucky	559	549	19	23	540	526
Louisiana	896	873	761	738	135	135
Maine	872	842	804	776	68	66
Massachusetts	38	45	22	26	16	19
Michigan	329	316	49	46	280	270
Minnesota	90	95	43	40	47	55
Missouri	257	251	57	59	200	192
Mississippi	2,468	2,254	2,034	1,838	434	416
New Hampshire	217	203	192	182	25	21
New Jersey	5	'3	(D)	(D)	(D)	(D)
New York	428	'439	160	'172	268	267
North Carolina	1,691	1,570	1,264	1,178	427	392
Ohio	288	292	(Z)	(Z)	288	292
Oklahoma	225	219	(D)	(D)	(D)	(D)
Pennsylvania	676	644	55	52	621	592
South Carolina	1,417	1,325	1,296	1,217	121	108
Tennessee	531	515	131	130	400	385
Texas	1,092	1,028	1,038	992	54	36
Vermont	201	187	116	109	85	78
Virginia	1,203	1,100	606	552	597	548
West Virginia	403	391	3	'5	400	386
Wisconsin	513	502	110	'98	403	404
Western United States	18,665	19,104	18,255	18,742	410	'362
Alaska and Hawaii	(D)	(D)	(D)	(D)	1	(Z)
Arizona	272	325	272	325	-	-
California	3,911	4,111	3,911	4,111	-	-
Colorado	123	115	(D)	(D)	(D)	(D)
Idaho	1,809	1,923	1,809	1,923	-	-
Montana	1,404	1,355	1,404	1,355	-	-
Nevada and Utah	(D)	(D)	(D)	(D)	(D)	(D)
New Mexico	110	139	110	139	-	-
Oregon	6,046	6,529	5,955	6,445	91	84
South Dakota	247	168	247	168	-	-
Washington	4,401	4,062	4,085	3,788	316	'274
Wyoming	187	213	187	213	-	-

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.
published figures. (Z) Represents less than 500,000 board feet.

'Revised by 5 percent or more from previously

Table 3. LUMBER PRODUCTION, BY SPECIES: 1992 AND 1991

[Millions of board feet, lumber talley]

Product description	1992	1991
United States	40,832	39,900
All Eastern species	22,167	20,796
Eastern softwoods	15,528	14,417
Pine, southern yellow	13,332	12,318
Pine, eastern white	501	453
Pine, other ¹	180	175
Spruce or fir ²	609	616
Other eastern softwood ³	188	187
Eastern softwoods, n.s.k.	718	668
Eastern hardwoods	6,639	6,379
Ash	197	184
Beech	66	72
Birch	70	68
Cherry	167	156
Cottonwood	50	53
Aspen	101	102
Gum, black, tupelo, and sweet	176	170
Hickory and pecan	90	100
Hard maple	319	319
Soft maple	193	197
Oak, red	1,716	1,679
Oak, white	811	760
Black walnut	37	32
Yellow poplar	710	630
Other eastern hardwoods ⁴	445	455
Mixed hardwoods ⁵	540	481
Eastern hardwoods, n.s.k.	951	921
All Western species	18,665	19,104
Western softwoods	18,255	18,742
Cedar, western red	766	692
Cedar, other ⁶	189	171
Douglas fir	7,697	7,804
Fir, white, hemfir, and other ⁷	2,972	2,875
Pine, ponderosa (western yellow)	2,993	3,302
Pine, western white	71	58
Pine, lodgepole	872	1,027
Pine, sugar	272	330
Redwood	828	876
Spruce ⁸	366	374
Other western softwoods ⁹	1,005	1,012
Western softwoods, n.s.k.	224	221
Western hardwoods ¹⁰	410	362

n.s.k. Not specified by kind.

¹Revised by 5 percent or more from previously published figures.¹Includes jack, and Norway (red) pines.²Includes eastern red cedar, northern and southern white cedar, balsam fir, and eastern spruce.³Includes hemlock, tamarack, and mixed woods.⁴Includes sycamore, basswood, cypress, and elm.⁵"Mixed hardwoods" includes mixed, ungraded hardwoods sawn for ties, timbers, blocking cants, and a pallet shook.⁶Includes Alaska, Port Orford, and Incense cedars.⁷Prior to 1989, hemfir was included with "Other western softwoods." This category now includes white fir, hemfir, and other western true firs. Therefore, figures for 1988 and earlier years may not be compatible with those for 1989 and later years.⁸Includes sitka and western/Engelman spruce.⁹Includes hemlock, larch, and mixed woods.¹⁰Includes alder, birch, cottonwood and aspen, maple, oaks, mixed woods, and woods not specified.

Table 4. PRODUCTION OF SOFTWOODS AND HARDWOODS, BY LUMBER INDUSTRY REGIONS: 1992 AND 1991

[Millions of board feet, lumber tally]

Lumber industry region	Total		Softwoods		Hardwoods	
	1992	1991	1992	1991	1992	1991
United States	40,832	39,900	33,783	33,159	7,049	6,741
Eastern lumber regions	22,167	20,796	15,528	14,417	6,639	6,379
Southern pine	13,332	12,318	13,332	12,318	-	-
Southern hardwood	2,898	2,729	-	-	2,898	2,729
Appalachian	1,436	1,339	154	124	1,282	1,215
Northern hemlock and hardwood	834	814	151	139	683	675
Northeastern	2,438	2,374	1,308	1,282	1,130	1,092
Other	1,229	1,222	583	554	646	668
Western lumber regions	18,665	19,104	18,255	18,742	410	362
Douglas fir	7,812	7,359	7,406	7,359	406	358
Western pine	9,384	9,900	9,381	9,896	3	4
California redwood	(D)	(D)	(D)	(D)	(Z)	(Z)
Alaska and Hawaii	(D)	(D)	(D)	(D)	1	(Z)

Note: Data shown in this table represent all species of hardwood and softwood lumber produced in each lumber industry region. For example, lumber production in the "Western pine" region shown in this table includes all species produced in the region, which totaled 9,384 million board feet in 1992. Production of Western pine lumber, as shown in table 3, totaled 4,208 million board feet in 1992.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. 'Revised by 5 percent or more from previously published figures. (Z) Represents less than 500,000 board feet.

Table 5. **PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SOFTWOODS AND HARDWOODS: 1992 AND 1991**

[Thousands of cubic meters]

Product code	Product description	Production ¹	Exports of domestic merchandise	Percent exports to manufacturers' production	Imports for consumption	Apparent consumption ²	Percent imports to apparent consumption
1992							
	Softwoods ³	79,728	6,060	7.6	31,075	104,743	29.7
24212 74	Pine	43,001	2,148	5.0	717	41,570	1.7
24212 71	Lodgepole pine	2,058	78	3.8	63	2,043	3.1
	Ponderosa pine (western yellow pine)	7,063	496	7.0	36	6,603	0.5
24212 14, 16, 17, 72, 76	Other pine, including southern yellow and eastern white pine.	33,880	1,574	4.6	618	32,924	1.9
24212 18, 78, 80, 66	Spruce and fir (other than douglas fir)	9,315	803	8.6	26,685	35,197	75.8
24212 63	Douglas fir	18,165	1,737	9.6	839	17,267	4.9
24212 60	Western red cedar	1,808	72	4.0	1,417	3,153	44.9
24212 20, 62, 79	Other softwoods, including hemlock and other cedars.	5,216	1,300	24.9	1,417	5,333	26.6
24212 00	Softwoods, n.s.k.	2,223	(NA)	(NA)	(NA)	(NA)	(NA)
	Hardwoods ³	16,635	2,169	13.0	420	14,886	2.8
24211 51	Ash	465	150	32.3	7	322	2.2
24211 53	Beech	156	9	5.8	3	150	2.0
24211 55	Birch	165	20	12.1	46	191	24.1
24211 57	Cherry	394	56	14.2	5	343	1.5
24211 65	Hickory and pecan	212	7	3.3	(Z)	205	-
24211 67, 69	Maple	1,208	171	14.2	123	1,160	10.6
24211 71	Red oak	4,050	639	15.8	12	3,423	0.4
24211 73	White oak	1,914	569	29.7	2	1,347	0.1
24211 75	Walnut	87	28	32.2	1	60	1.7
24211 77	Yellow poplar	1,676	133	7.9	7	1,550	0.5
24211 59, 61, 63, 79, 99	Other hardwoods, including cottonwood, aspen, and gum.	4,064	387	9.5	214	3,891	5.5
24211 00	Hardwoods, n.s.k.	2,244	(NA)	(NA)	(NA)	(NA)	(NA)
1991							
	Softwoods ³	78,255	7,077	9.0	26,993	98,171	27.5
24212 74	Pine	41,685	2,728	6.5	509	39,466	1.3
24212 71	Lodgepole pine	2,424	94	3.9	4	2,334	0.2
	Ponderosa pine (western yellow pine)	7,793	342	4.4	47	7,498	0.6
24212 14, 16, 17, 72, 76	Other pine, including southern yellow and eastern white pine.	31,468	2,292	7.3	458	29,634	1.5
24212 18, 78, 80, 66	Spruce and fir (other than douglas fir)	9,121	793	8.7	23,166	31,494	73.6
24212 63	Douglas fir	18,417	1,883	10.2	835	17,369	4.8
24212 60	Western red cedar	1,633	113	6.9	1,506	3,026	49.8
24212 20, 62, 79	Other softwoods, including hemlock and other cedars.	5,301	1,560	29.4	977	4,718	20.7
24212 00	Softwoods, n.s.k.	2,098	(NA)	(NA)	(NA)	(NA)	(NA)
	Hardwoods ³	15,909	2,050	12.9	298	14,157	2.1
24211 51	Ash	434	151	34.8	5	288	1.7
24211 53	Beech	170	9	5.3	2	163	1.2
24211 55	Birch	160	19	11.9	42	183	23.0
24211 57	Cherry	368	52	14.1	2	318	0.6
24211 65	Hickory and pecan	236	14	5.9	(Z)	222	-
24211 67, 69	Maple	1,218	127	10.4	66	1,157	5.7
24211 71	Red oak	3,962	628	15.9	9	3,343	0.3
24211 73	White oak	1,794	564	31.4	2	1,232	0.2
24211 75	Walnut	76	40	52.6	2	38	5.3
24211 77	Yellow poplar	1,487	118	7.9	12	1,381	0.9
24211 59, 61, 63, 79, 99	Other hardwoods, including cottonwood, aspen, and gum.	3,830	328	8.6	156	3,658	4.3
24211 00	Hardwoods, n.s.k.	2,174	(NA)	(NA)	(NA)	(NA)	(NA)

Note: For a comparison of SIC-based product codes, Schedule B export numbers, and HTSUSA import numbers, see appendix C.

- Represents zero. (NA) Not available. n.s.k. Not specified by kind. (Z) Represents less than 500,000 cubic meters.

¹The harmonized import and export figures for 1992 and 1991 were collected in cubic meters. A conversion factor of 0.423729 was used to convert from thousand board feet to thousands of cubic meters.²"Apparent consumption" is equal to "Production" plus "Imports" minus "Exports."³The 1992 and 1991 totals for "Hardwoods and Softwoods" include the n.s.k. production figures.

HISTORICAL NOTE

Data on lumber production and stocks have been collected by the Bureau of the Census since 1904. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact the Bureau of the Census, Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Al Foreman, 301-763-5531 or Beth Eldridge-Lee, 301-763-2414.

3.2 REFRACTORIES

INTRODUCTION

The data in this section are from a survey of all companies engaged in the manufacture of refractories. The survey panel for this survey includes all known manufacturers of refractories, approximately 120 companies. Data are collected in quantity and value of shipments. Quantity of shipments is measured in short tons, metric tons, and M bricks (thousand 9-inch equivalent). Related imports and exports are also shown.

SUMMARY OF FINDINGS

In 1992, total manufacturers' shipments of refractories amount to \$1,957 million, an increase of 0.5 percent from \$1,947 million in 1991.

Shipments of clay refractories decreased 4.1 percent to \$752 million in 1992 from \$784 million in 1991. Clay refractories shipments accounted for 38 percent of total refractories shipments in 1992, down from 40 percent in 1991.

Shipments of nonclay refractories increased 3.6 percent to \$1,205 million in 1992 from \$1,163 million in 1991. Nonclay refractories shipments accounted for 62 percent of total refractories shipments in 1992, up from 60 percent in 1991.

Bricks and shapes continue to be the dominate form of refractories even though they showed a decrease of 27.3 percent to \$1,073 million in 1992, from \$1,476 million in 1991. Unshaped clay refractories decreased 1.7 percent to \$290 million in 1992, from \$295 million in 1991. Mortars increased 56.3 percent to \$25 million in 1992, from \$16 million in 1991. Plastic refractories and ramming mixes increased 7.1 percent to \$106 million in 1992, from \$99 million in 1991.

EXPLANATION OF TERMS

Unit of Measure. Data for quantity of shipments have been collected in two distinct units of measure. Shipments of all refractories are collected in metric tons, and shipments of bricks and shapes are also collected in thousand 9-inch equivalents. (A 9-inch equivalent is a solid volume of 101.25 cubic inches.) For ease of comparison, the metric tons data have been multiplied by the appropriate factor (1.103) to derive the short tons figures.

High Alumina Brick and Shapes (50 Percent Al_2O_3). Bricks and shapes made substantially of calcined diaspore or bauxite. Calcined as applied to diaspore and bauxite implies heat treatment short of fusion for volume stability prior to use in a refractory product. In the process, volatile materials are driven off and chemical changes take place.

Ladle Brick. Alumina ladle brick less than 50 percent Al_2O_3 .

High Alumina Ladle Brick. Ladle brick containing 50 percent or more Al_2O_3 .

Sleeves, Nozzles, Runner Brick, Tuyeres, and Side Grate Brick. Includes nozzles and sleeves described in American Society of Testing and Materials (ASTM) C-435, runner brick, tuyeres, and slide gate brick, externally applied, all compositions.

Refractory Bonding Mortars, Wet and Dry Tapes. Includes both air-setting and heatsetting bonding mortars that contain up to 60 percent Al_2O_3 , dry basis, by analysis.

Plastic Refractories and Ramming Mixes. Includes products referred to as plastic fire brick and the less-plastic materials intended for ramming into place after the addition of water (when shipped in dry form) containing less than 50 percent Al_2O_3 .

High Alumina Plastic Refractories and Ramming Mixes. Plastics refractories and ramming mixes containing 50 percent to 87.5 percent Al_2O_3 .

Clay Castable Refractories (Hydraulic Setting). Hydraulic setting castables containing up to 50 percent Al_2O_3 and made from calcined fireclay, diaspore or bauxite base, and Portland or calcium aluminate cements. Castables based on mullite, fused or tabular alumina, or other nonclay materials are excluded.

High Alumina Castable Refractories (Hydraulic Setting). Castable refractories containing more than 50 percent Al_2O_3 , excluding those based on mullite or extra high alumina.

Insulating Castables. Hydraulic setting castables designed for low thermal conductivity and having bulk densities as defined in ASTM Classification C-401 no greater than 105 pounds per cubic foot.

Fireclay Gunning Mixes. Alumina-silicate compositions up to 50 percent Al_2O_3 , specifically engineered for gunning applications; may include hydraulic setting or other chemical bonding agents.

Molten Cast Refractories. Products made by fusing refractory oxides, as in an electric furnace, and pouring the molten material into molds to form finished shapes.

Magnesite and Magnesite-Chrome Brick and Shapes (Magnesite Predominating; Products Analyzing Greater than 55 percent Mg). Pitch-bonded magnesite and magnesite-dolomite brick (magnesite predominating), not including burned impregnated brick, molten cast magnesite and magnesite-chrome brick and shapes, or those made of fused magnesia.

Chrome and Chrome-Magnesite Brick and Shapes. Chrome predominating products analyzing no more than 55 percent Mg. Molten cast chrome and shapes are excluded.

Mullite Brick and Shapes. Mullite brick and shapes made predominantly of kyanite, sillimanite, and alusite, or synthetic mullite (excluding molten cast).

Extra High Alumina Brick and Shapes (Over 87.5 Percent Al_2O_3). Products made predominantly of fused bauxite or fused or dense-sintered alumina. Molten cast extra high alumina brick and shapes are excluded.

Fused. As applied to bauxite and alumina, fused means melting, as in an electric furnace; after cooling, the product is crushed and graded for use in the refractory.

Dense-Sintered Alumina. Refer to heat treatment (short of melting) to render it relatively volume-stable for use in a refractory.

High Alumina Mortars. Mortars containing more than 60 percent Al_2O_3 .

Other Nonclay Mortars. Includes sterite, zircon, zirconia, and mullite.

Nonclay Castable Refractories (Hydraulic Setting). Hydraulic setting castables made from nonclay refractory materials and Portland or calcium aluminate cements.

Basic Nonclay Gunning Mixes. Includes chrome, chrome-magnesia, and dolomite gunning mixes.

Other Nonclay Gunning Mixes. Includes extra high alumina, mullite, zircon, and other gunning mixes.

Table 6. **VALUE OF SHIPMENTS OF REFRACTORIES: 1986 TO 1992**

[Thousands of dollars]

Year	Total	Clay	Nonclay
1992	1,956,992	752,283	1,204,709
1991	1,946,842	784,331	1,162,511
1990	2,002,833	771,315	1,231,518
1989	2,010,947	823,266	1,187,681
1988	1,950,032	813,739	1,136,293
1987	1,682,338	739,770	942,568
1986	1,521,323	670,002	851,321

Table 7. QUANTITY AND VALUE OF SHIPMENTS OF REFRACTORIES, BY TYPE: 1992 AND 1991

[Value in thousands of dollars]

Product code	Product description	Number of companies	1992				1991			
			Quantity shipped (unit of measure)			Value of shipments	Quantity shipped (unit of measure)			Value of shipments
			Short tons	Metric tons	M bricks (thousand 9-inch equivalent)		Short tons	Metric tons	M bricks (thousand 9-inch equivalent)	
3255- —	Clay and nonclay refractories.....	(X)	(X)	(X)	(X)	1,956,992	(X)	(X)	(X)	1,946,842
32550 11	Clay refractories.....	(X)	(X)	(X)	(X)	752,283	(X)	(X)	(X)	784,331
	Brick and shapes.....	(X)	821,294	744,600	272,205	389,600	'880,155	'797,964	'260,280	'379,871
32550 14	Fireclay, including semi-silica, bloating and superduty fireclay brick and shapes; fireclay and high alumina pouring pit refractories; clay kiln furniture, radiant heater elements, and other miscellaneous clay refractory shapes.....									
	High alumina brick and shapes containing 50 percent alumina and over, including glass-house pots, tank blocks, feeder parts, and upper structure shapes, made predominantly of catched bauxite, kyanite, andalusite, and similar raw materials. Include high alumina pouring pit refractories (containing 50 percent alumina and over), sleeves, nozzles, runners, and ladle gate parts.....	29	388,744	352,442	144,092	154,448	'417,615	'378,617	'126,231	'136,807
32550 35	Insulating brick and shapes, under 2600 degrees F and 2600 degrees F and over ¹									
	Unshaped clay refractories.....	35	380,740	345,186	92,587	190,766	409,557	371,312	95,207	197,298
32550 55	Refractory bonding mortars, wet and dry, including clay and high alumina.....	18	51,810	46,972	35,526	44,386	52,983	48,035	38,842	45,766
32550 61	Plastic refractories and ramming mixes, less than 50 percent alumina; high alumina plastic refractories and ramming mixes, 50 percent alumina and over, and high alumina phosphate bonded plastic and ramming mixes, 50 percent alumina and over ^{1,2}	(X)	656,996	595,644	(X)	290,004	668,994	606,522	(X)	294,734
	Castable refractories less than 50 percent alumina; high alumina castables 50 percent alumina and over; and insulating castables, (hydraulic setting) density up to 105 pounds/cubic foot ³	26	200,392	181,679	(X)	90,593	202,777	183,841	(X)	91,594
32550 70	Fireclay gunning mixes, including hydraulic setting gunning mixes, less than 50 percent alumina, high alumina gunning mixes, 50 percent alumina and over, and insulating gunning mixes (hydraulic setting).....	35	276,420	250,607	(X)	138,234	287,630	260,771	(X)	143,015
	Other refractory raw materials and refractory materials sold in lump or ground form, either for direct use by customer as a finished refractory product or as exported material.....	25	118,889	107,787	(X)	34,901	124,810	113,155	(X)	35,875
32550 85	Clay and high alumina refractory raw materials ⁴	(X)	321,078	291,095	(X)	37,267	'401,679	'364,170	(X)	72,804
32550 95	Clay and high alumina refractory raw materials ⁵	16	291,900	264,642	(X)	34,780	368,074	333,703	(X)	70,115
32550 00	Clay refractories, n.s.k. ⁶	10	29,178	26,453	(X)	2,487	'33,605	'30,467	(X)	'2,689
3297- —	Nonclay refractories.....	(X)	(X)	(X)	(X)	35,412	(X)	(X)	(X)	36,922
	Brick and shapes.....	(X)	489,460	443,752	(X)	1,204,709	500,617	453,867	(X)	1,162,511
32970 12	All silica brick and shapes, excluding semi-silica.....	(X)	37,053	33,593	29,128	683,354	43,306	39,262	127,136	691,891
32970 13	Magnesite-carbon brick and shapes, both less than 7 percent carbon, 7 percent carbon and over, predominantly pitch and resin bonded, and carbon magnesite brick.....	18				43,668			36,740	52,087
32970 15	Magnesite brick and shapes, burned and unburned.....	9	110,801	100,454	19,755	128,557	116,360	105,494	20,886	123,582
32970 19	Magnesite-chrome, chrome-magnesite, including high fires, burned and unburned brick, and chrome brick.....	8	24,288	22,020	5,017	20,959	19,894	18,036	4,103	15,637
32970 48	Silicon-carbide brick and shapes (made predominantly of silicon carbide), including kiln furniture.....	8	76,253	69,132	13,821	65,681	94,448	85,628	17,286	74,260
32970 50	Extra-high alumina brick and shapes containing 87.5 percent alumina and higher, and extra high alumina pouring pit refractories, including sleeves, nozzles, runners, tuyeres, ladle gate parts, and mulite brick shapes (made predominantly of synthetic or fused mulites) ⁷	13	8,905	8,073	1,266	43,311	10,887	9,870	1,490	46,523
		31	34,417	31,203	8,239	113,463	'31,598	'28,647	'6,849	110,917

See footnotes at end of table.

Table 7. QUANTITY AND VALUE OF SHIPMENTS OF REFRACTORIES, BY TYPE: 1992 AND 1991—Continued

[Value in thousands of dollars]

Product code	Product description	Number of companies	1992				1991			
			Quantity shipped (unit of measure)			Value of shipments	Quantity shipped (unit of measure)			Value of shipments
			Short tons	Metric tons	M bricks (thousand 9-inch equivalent)		Short tons	Metric tons	M bricks (thousand 9-inch equivalent)	
32970 55	Nonclay refractories—Cont. Brick and shapes—Cont. Zircon and zirconia brick and shapes (made predominantly of either of these materials, including electrocast)	20	5,160	4,678	1,668	36,693	4,883	4,427	1,476	30,856
32970 58	All other brick and shapes, including dolomite, dolomite-magnesite, forsterite, pyrophilite-zircon, carbon and graphite crucibles, retorts, stopper heads, natural graphite, refractories, and molten cast	22	192,583	174,599	41,382	231,022	179,241	162,503	38,306	238,029
32970 61	Mortars	(X)	27,059	24,532	(X)	25,392	27,149	24,614	(X)	16,458
32970 63	Unshaped nonclay refractories basic bonding mortars made predominantly of magnesite or chrome ore, dolomite, and other nonclay mortars (made predominantly of forsterite, zircon, and silica)	12	19,907	18,048	(X)	18,260	19,342	17,536	(X)	9,338
32970 65	Extra high alumina refractory mortars (made predominantly of fused or synthetic alumina and mullite)	21	7,152	6,484	(X)	7,132	7,807	7,078	(X)	7,120
32970 67	Plastic refractories and ramming mixes	(X)	133,659	121,177	(X)	106,341	116,121	105,278	(X)	98,977
32970 69	Basic castable mixes, including chrome, chrome-magnesia, magnesite-chrome, magnesite, and dolomite	17	48,724	44,174	(X)	30,012	31,090	28,187	(X)	20,854
32970 72	Extra-high alumina plastic refractories and ramming mixes, 87.5 percent alumina and higher (made predominantly of fused or synthetic aluminas and mullites), and extra high alumina phosphate bonded plastics and ramming mixes ¹	24	56,186	50,939	(X)	62,221	55,593	50,402	(X)	59,859
32970 75	Other nonclay plastic refractories and ramming mixes (forsterite, zircon, etc.)	17	28,749	26,064	(X)	14,108	29,438	26,689	(X)	18,264
32970 78	Other nonclay refractory castables and plastics	17	8,253	7,482	(X)	8,287	10,195	9,243	(X)	9,605
32970 84	Basic nonclay gunning mixes (including chrome, chrome-magnesia, magnesite-chrome, magnesite, and dolomite) and other nonclay gunning mixes (forsterite, zircon, etc.)	18	303,345	275,018	(X)	120,025	271,884	246,495	(X)	106,370
32970 94	Ceramic refractory fibers, 1500-2701° F and higher	11	41,449	37,578	(X)	106,231	37,174	33,703	(X)	97,514
32970 96	Other nonclay refractory materials sold in lump or ground form, including ground silica	(X)	286,758	259,980	(X)	113,940	302,252	274,027	(X)	101,998
32970 00	Domestic shipments for direct use by customers as a finished refractory and all exported material ²	20	(D)	(D)	(X)	72,245	(D)	(D)	(X)	71,690
32970 23	All other domestic shipments of nonclay refractory materials sold in lump or ground form as a refractory raw material ³	11	(D)	(D)	(X)	41,695	(D)	(D)	(X)	30,308
32970 25	Nonclay refractories, n.s.k. ⁴	(X)	(X)	(X)	(X)	41,139	(X)	(X)	(X)	39,698
32970 27	Dead-burned magnesite or magnesite ⁵	(X)	243,068	220,370	(X)	67,061	265,799	240,978	(X)	75,595
32970 29	Domestic shipments for direct use as finished refractory products and all exported material	6	89,900	81,505	(X)	23,818	(D)	(D)	(X)	(D)
32970 31	All other domestic shipments predominantly for use as a refractory raw material	7	153,168	138,865	(X)	43,243	(D)	(D)	(X)	(D)
32740 71	Dead-burned dolomite	5	321,542	291,516	(X)	21,371	316,694	287,121	(X)	21,476

(D) Data withheld to avoid disclosing figures for individual companies. n.s.k. Not specified by kind. (X) Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹Excludes data for mullite and extra-high alumina refractories. These products are included in the "Nonclay refractories" section.²Includes products referred to as plastic firebrick and the less-plastic materials intended for ramming into place after the addition of water (when shipped in dry form).³Includes hydraulic setting castables designed for low thermal conductivity and having bulk densities as defined in ASTM classification C-401, not greater than 105 pounds/cubic foot.⁴Includes shipments to refractory producers for reprocessing the manufacture of brick and other refractories.⁵Includes shipments for direct use as finished refractory products by establishments classified in manufacturing industries and excludes shipments to refractory producers for reprocessing in the manufacture of brick and other refractories.

Other refractories. Includes all exports.

⁶Not specified by kind (n.s.k.) represents the value of shipments for establishments which did not report detailed information and establishments, typically with less than five employees, which were not included on the MA32C mailing panel.⁷Used, as applied to bauxite and alumina means complete melting, as in an electric furnace; after cooling, the product is crushed and graded for use in the refractory.⁸Final items not include shipments of dead-burned magnesite or magnesite for direct use as a finished refractory product. These two products are not classified as refractories under the Standard Industrial Classification (SIC) system.

Table 8. SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF REFRACTORIES, BY TYPE: 1992 AND 1991

[Value in thousands of dollars]

Product code ¹	Product description	Unit of measure	Manufacturers' shipments		Exports of domestic merchandise ^{1, 2}		Percent exports to manufacturers' shipments		Imports for consumption ^{1, 3}		Apparent consumption ⁵		Percent imports to apparent consumption	
			Quantity	Value	Quantity	Value at port ²	Quantity	Value	Quantity	Value ⁴	Quantity	Value	Quantity	Value
1992														
32550 11,14,35 32550 55,61,65, 70 32550 85,95 32970 13,15,19 32970 12,48,50, 55,58 32970 61,63,65,67, 68,69,72,75 32970 94,96	Clay and nonclay refractories ⁶	..... (X)	(X)	1,880,441	(X)	369,303	(X)	20.0	(X)	246,224	(X)	1,757,362	(X)	14.0
	Clay refractories	..... (X)	(X)	716,871	(X)	97,012	(X)	14.0	(X)	30,740	(X)	650,599	(X)	5.0
	Brick and shapes	Thousand standard brick equivalent	272,205	389,600	(NA)	55,583	(NA)	14.0	(NA)	25,890	(NA)	359,907	(NA)	7.0
	Unshaped clay refractories and gunning mixes	Metric tons	595,644	290,004	8,176	6,540	1.0	2.0	334	277	587,802	283,741	-	-
	Other clay refractory materials	..... do	291,095	37,267	(NA)	34,889	(NA)	94.0	(NA)	4,573	(NA)	6,951	(NA)	66.0
	Nonclay refractories	..... (X)	(X)	1,163,570	(X)	272,291	(X)	23.0	(X)	215,484	(X)	1,106,763	(X)	19.0
	Nonclay magnesite and magnesite-chrome brick and shapes and chrome brick	Thousand standard brick equivalent	38,593	215,197	(NA)	57,697	(NA)	27.0	(NA)	52,886	(NA)	210,386	(NA)	25.0
	All other brick and shapes	..... do	81,683	468,157	(NA)	86,568	(NA)	18.0	(NA)	75,206	(NA)	456,795	(NA)	16.0
	Unshaped nonclay refractories and gunning mixes	Metric tons	465,787	366,276	102,947	87,623	22.0	24.0	30,185	20,732	393,025	299,385	8.0	7.0
	Other nonclay refractory materials	..... do	259,980	113,940	(NA)	40,403	(NA)	35.0	(NA)	66,660	(NA)	140,197	(NA)	48.0
1991														
32550 11,14,35 32550 55,61,65, 70 32550 85,95 32970 13,15,19 32970 12,48,50, 55,58 32970 61,63,65, 67,68,69, 72,75 32970 94,96	Clay and nonclay refractories ⁶	..... (X)	(X)	1,870,222	(X)	396,919	(X)	21.0	(X)	254,569	(X)	1,727,872	(X)	15.0
	Clay refractories	..... (X)	(X)	747,409	(X)	137,045	(X)	18.0	(X)	25,202	(X)	635,566	(X)	4.0
	Brick and shapes	Thousand standard brick equivalent	260,280	379,871	(NA)	63,839	(NA)	17.0	(NA)	19,463	(NA)	335,495	(NA)	6.0
	Unshaped clay refractories and gunning mixes	Metric tons	606,522	294,734	13,589	9,475	2.0	3.0	2,242	988	595,175	286,247	-	-
	Other clay refractory materials	..... do	364,170	72,804	(NA)	63,731	(NA)	88.0	(NA)	4,751	(NA)	13,824	(NA)	34.0
	Nonclay refractories	..... (X)	(X)	1,122,813	(X)	259,874	(X)	23.0	(X)	229,367	(X)	1,092,306	(X)	21.0
	Nonclay magnesite and magnesite-chrome brick and shapes and chrome brick	Thousand standard brick equivalent	42,275	213,479	(NA)	49,777	(NA)	23.0	(NA)	57,334	(NA)	221,036	(NA)	26.0
	All other brick and shapes	..... do	84,861	478,412	(NA)	95,708	(NA)	20.0	(NA)	74,824	(NA)	457,528	(NA)	16.0
	Unshaped nonclay refractories and gunning mixes	Metric tons	419,333	328,924	92,961	67,359	22.0	20.0	59,315	33,061	385,687	294,626	15.0	11.0
	Other nonclay refractory materials	..... do	274,027	101,998	(NA)	47,030	(NA)	46.0	(NA)	64,148	(NA)	119,116	(NA)	54.0

- Represents zero. (NA) Not available. (X) Not applicable.

¹For comparison of SIC-based codes with Schedule B export numbers and HTSUSA import numbers, see appendix C.²Source: Bureau of the Census report EM 545, U.S. Exports.³Source: Bureau of the Census report IM 146, U.S. Imports for Consumption and General Imports.⁴Value at port includes both import value and duty value.⁵Apparent consumption is derived by subtracting "Exports" from the total of "Shipments" plus "Imports" (including duty).⁶The "Clay and nonclay refractories" totals shown here excludes product codes 32550 00 and 32970 00; therefore, they differ from the totals shown in tables 6 and 7.

HISTORICAL NOTES

Data on refractories have been collected by the Bureau of the Census since 1947. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact John Miller, 301-763-7837 or Robert Miller, 301-763-4484.

3.3 CLAY CONSTRUCTION PRODUCTS

INTRODUCTION

The data in this section are from a survey of manufacturers of clay products, including brick, tile, pipe, and fittings. The panel for this survey consists of all known producers of clay construction products, approximately 220 companies. This survey supplies a regional state breakout of production, quantity of shipments, and value of shipments for brick (building or common and face), by quarter. The tile, pipe, and fittings products are available on an overall industry basis, by quarter. Related imports and exports are also shown.

SUMMARY OF FINDINGS

Shipments of the principal clay product, brick (building or common), increased 2.7 percent to \$906.8 million in 1992, from \$882.6 million in 1991. The South Atlantic region accounted for approximately 30 percent of the total value of brick shipments in 1992 and 1991. More specifically, North Carolina accounted for approximately 13 percent of the total value of brick shipments in 1992 and 1991.

Shipments of facing tile increased 35.7 percent to \$19.1 million in 1992, from \$14.1 million in 1991.

Shipments of clay floor and wall tile increased 0.2 percent to \$640.0 million in 1992, from \$638.6 million in 1991. Of this, shipments of glazed and unglazed floor and wall tile increased 0.7 percent to \$549.7 million in 1992, from \$545.7 million in 1991; and shipments of glazed and unglazed ceramic mosaic tile decreased 2.9 percent to \$90.3 million in 1992, from \$93.0 million in 1991.

Shipments of vitrified clay sewer and pipe fittings decreased 25.7 percent to \$37.6 million in 1992, from \$50.6 million in 1991.

EXPLANATION OF TERMS

Building or Common Brick. Any brick made primarily for building purposes and not especially treated for texture or color.

Facing Brick. Brick made especially for facing purposes, often treated to produce surface texture, and made of selected clays or otherwise treated to produce desired color.

Production and Shipments. Due to breakage and inventory adjustments, production (quantity) and shipments (quantity) may vary widely on a quarterly basis.

Facing Tile. Tile designed for use in exterior or interior walls, partitions, or columns where the face of the tile is to be left exposed.

Ceramic Glazed Brick. Brick having a glaze of bright satin or glass finish obtained by spraying the clay body with a compound of metallic oxides, chemicals, and clays, and burning at high temperature, thus fusing the glaze to the body to make them inseparable.

Structural Clay Tile. A hollow masonry building unit composed of burned clay, shale, fireclay, or mixtures thereof, and having parallel air cells.

Quarry Tile. Glazed or unglazed tile made by the process from natural clay or shale, usually having six square inches (39 square centimeters) or more of facial area.

Vitrified. This characteristic of a clay product results when the temperature in the kiln is sufficient to fuse all the grains and close all the pores of the clay, making the mass impervious.

Table 9. PRODUCTION AND SHIPMENTS OF CLAY CONSTRUCTION PRODUCTS: 1989 TO 1992

Product code	Product description	Production (quantity)	Shipments	
			Quantity	Value (million dollars)
32510 11	Brick (building or common and face) (million standard brick):			
	1992	6,029.4	6,167.0	906.8
	1991	5,939.1	5,975.4	882.6
	1990	7,116.2	6,872.7	1,014.0
	1989	8,031.6	7,493.8	1,087.7
32591 00	Vitrified clay sewer pipe and fittings (short tons):			
	1992	164.0	157.4	37.6
	1991	205.8	195.6	50.6
	1990	255.6	242.0	60.2
	1989	296.0	251.9	63.0
32510 61	Structural clay tile (except facing) (thousand short tons):			
	1992	(D)	(D)	(D)
	1991	(D)	(D)	(D)
	1990	(D)	(D)	(D)
	1989	(D)	(D)	(D)
32510 31	Facing tile (structural), unglazed and salt glazed, ceramic glazed, including glazed brick (million brick equivalent):			
	1992	43.0	46.9	19.1
	1991	31.8	31.9	14.1
	1990	32.4	31.0	14.7
	1989	39.9	34.9	14.8
32530 00	Clay floor and wall tile, including quarry tile (million sq. ft.):			
	1992	488.0	495.7	640.0
	1991	477.7	484.8	638.6
	1990	548.4	509.2	686.5
	1989	595.4	543.1	697.7
32530 05 32530 15 32530 30	Glazed and unglazed floor and wall tile, including quarry tile (million sq. ft.):			
	1992	437.9	437.4	549.7
	1991	415.5	424.7	545.7
	1990	468.3	435.1	571.9
	1989	507.2	463.5	578.5
32530 20	Glazed and unglazed ceramic mosaic tile (million sq. ft.): ¹			
	1992	50.1	58.3	90.3
	1991	62.2	60.1	93.0
	1990	80.1	74.1	114.6
	1989	88.2	79.6	119.2

Note: Detail data may not add to totals due to independent rounding.

(D) Data withheld to avoid disclosing figures for individual companies.

¹Revised by 5 percent or more from previously published figures.¹Tiles having a facial area of less than 6 square inches.

**Table 10. PRODUCTION OF BRICK (BUILDING OR COMMON AND FACE), BY DIVISIONS AND STATES:
1992 AND 1991**

[Thousands of brick: 2-1/4 inch x 3-5/8 inch brick equivalent]

Division and State	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992					
United States.....	6,029,428	'1,306,175	1,559,716	1,633,080	'1,530,457
New England ¹	68,845	'16,642	'17,202	'18,262	'16,739
Middle Atlantic ²	327,559	61,635	97,683	105,044	63,197
East North Central.....	574,414	'128,743	'147,966	'152,503	'145,202
Ohio.....	377,688	'87,139	'96,477	'99,755	'94,317
Other (Illinois, Indiana, Michigan, and Wisconsin) ..	196,726	41,604	51,489	52,748	50,885
West North Central.....	285,172	'58,663	74,716	78,166	73,627
Kansas and Missouri.....	106,840	'20,853	'27,103	'30,111	'28,773
Other (Iowa, Minnesota, Nebraska, North Dakota, and South Dakota).....	178,332	'37,810	47,613	48,055	44,854
South Atlantic.....	2,038,485	427,441	543,002	553,235	'514,807
Maryland and Virginia.....	342,753	'71,609	'94,683	91,004	85,457
North Carolina.....	904,770	190,161	'244,376	'244,543	'225,690
South Carolina.....	354,864	'88,193	'91,068	'92,689	'82,914
Other (Delaware, District of Columbia, Florida, Georgia, and West Virginia).....	436,098	77,478	112,875	124,999	120,746
East South Central.....	1,285,213	278,096	322,890	345,470	338,757
Alabama.....	619,704	128,833	154,949	170,669	165,253
Kentucky and Tennessee.....	433,928	97,108	108,582	114,281	113,957
Mississippi.....	231,581	'52,155	'59,359	'60,520	'59,547
West South Central.....	1,051,002	239,743	'251,788	274,152	285,319
Arkansas.....	206,881	45,250	51,448	54,169	56,014
Louisiana.....	63,154	'13,765	'15,902	'17,836	'15,651
Oklahoma.....	160,815	'37,222	'33,291	'39,430	'50,872
Texas.....	620,152	'143,506	'151,147	'162,717	'162,782
Mountain.....	232,922	'55,540	'59,504	'61,250	'56,628
Colorado.....	146,981	'33,975	'38,182	'39,290	'35,534
Other (Arizona, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming).....	85,941	'21,565	21,322	21,960	'21,094
Pacific ³	165,816	39,672	44,965	'44,998	36,181
California.....	96,772	'24,577	27,042	'26,371	18,782
Oregon and Washington.....	69,044	15,095	17,923	18,627	17,399

See footnotes at end of table 12.

Table 10. **PRODUCTION OF BRICK (BUILDING OR COMMON AND FACE), BY DIVISIONS AND STATES: 1992 AND 1991—Continued**

[Thousands of brick: 2-1/4 inch x 3-5/8 inch brick equivalent]

Division and State	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1991					
United States.....	'5,939,091	'1,370,005	'1,498,768	'1,561,790	'1,508,528
New England ¹	71,465	'18,093	17,721	18,445	17,206
Middle Atlantic ²	'382,508	'83,981	'117,353	'108,417	72,757
East North Central.....	'540,217	128,274	'139,177	'136,340	'136,426
Ohio.....	'373,557	99,552	'96,588	'91,866	'85,551
Other (Illinois, Indiana, Michigan, and Wisconsin) ..	166,660	28,722	42,589	44,474	50,875
West North Central.....	'326,382	'71,276	'87,116	'88,877	'79,113
Kansas and Missouri.....	'128,710	'31,876	'33,394	'32,216	'31,224
Other (Iowa, Minnesota, Nebraska, North Dakota, and South Dakota).....	197,672	39,400	'53,722	'56,661	47,889
South Atlantic.....	'1,976,728	'448,416	'496,668	'518,005	'513,639
Maryland and Virginia.....	351,463	71,111	85,801	102,491	92,060
North Carolina.....	759,404	162,923	194,285	203,124	199,072
South Carolina.....	'423,661	'106,065	'100,674	'100,940	'115,982
Other (Delaware, District of Columbia, Florida, Georgia, and West Virginia).....	442,200	108,317	115,908	111,450	106,525
East South Central.....	'1,157,281	'264,524	'282,476	'306,709	'303,572
Alabama.....	474,801	109,339	115,755	120,704	129,003
Kentucky and Tennessee.....	'430,287	'90,178	'105,763	'120,187	'114,159
Mississippi.....	'252,193	'65,007	'60,958	'65,818	'60,410
West South Central.....	'1,002,708	241,673	'246,905	'252,036	'262,094
Arkansas.....	'192,073	'45,440	'47,936	'50,577	'48,120
Louisiana.....	'53,319	'13,889	'13,396	'13,213	'12,821
Oklahoma.....	189,792	45,300	46,470	50,422	47,600
Texas.....	'567,524	137,044	'139,103	'137,824	'153,553
Mountain.....	'247,915	52,514	'53,152	'73,880	68,369
Colorado.....	123,166	27,851	29,233	29,539	36,543
Other (Arizona, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming).....	'124,749	'24,663	'23,919	'44,341	'31,826
Pacific ³	'233,887	'61,254	'58,200	'59,081	'55,352
California.....	'140,052	'33,370	'37,031	'36,218	'33,433
Oregon and Washington.....	93,835	27,884	21,169	22,863	21,919

See footnotes at end of table 12.

Table 11. QUANTITY OF SHIPMENTS OF BRICK (BUILDING OR COMMON AND FACE), BY DIVISIONS AND STATES: 1992 AND 1991

[Thousands of brick: 2-1/4 inch x 3-5/8 inch brick equivalent]

Division and State	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992					
United States.....	6,166,976	'1,284,611	'1,641,278	1,733,173	'1,507,914
New England ¹	69,114	'11,867	'20,351	'20,277	'16,619
Middle Atlantic ²	353,054	'59,141	109,040	104,036	80,837
East North Central.....	555,128	'111,311	'151,732	'159,496	'132,589
Ohio.....	352,810	'70,826	'96,642	'100,297	'85,045
Other (Illinois, Indiana, Michigan, and Wisconsin) ..	202,318	40,485	55,090	59,199	47,544
West North Central.....	296,489	'57,550	78,323	88,582	72,034
Kansas and Missouri.....	114,684	21,972	30,215	34,691	27,806
Other (Iowa, Minnesota, Nebraska, North Dakota, and South Dakota).....	181,805	'35,578	48,108	53,891	44,228
South Atlantic.....	2,058,300	'431,989	540,409	573,040	'512,862
Maryland and Virginia.....	356,111	'77,021	95,368	'99,742	83,980
North Carolina.....	881,659	'188,009	'228,263	243,845	'221,542
South Carolina.....	361,821	'87,438	'90,283	'95,846	'88,254
Other (Delaware, District of Columbia, Florida, Georgia, and West Virginia).....	458,709	79,521	126,495	133,607	119,086
East South Central.....	1,311,477	'285,174	343,057	365,471	317,775
Alabama.....	618,886	132,964	163,123	172,251	150,548
Kentucky and Tennessee.....	456,095	95,346	119,885	130,599	110,265
Mississippi.....	236,496	'56,864	'60,049	'62,621	'56,962
West South Central.....	1,122,705	'237,334	'288,910	312,352	'284,109
Arkansas.....	218,378	44,869	54,594	63,012	55,903
Louisiana.....	67,956	'13,419	'18,118	'19,641	'16,778
Oklahoma.....	160,569	'38,790	'38,314	'40,798	'42,667
Texas.....	675,802	'140,256	'177,884	'188,901	'168,761
Mountain.....	227,684	54,393	'58,940	'61,502	'52,849
Colorado.....	145,477	'33,774	'38,183	'39,412	'34,108
Other (Arizona, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming).....	82,207	'20,619	20,757	22,090	'18,741
Pacific ³	173,025	35,852	'50,516	48,417	'38,240
California.....	97,683	'20,227	'30,487	27,194	'19,775
Oregon and Washington.....	75,342	15,625	20,029	21,223	18,465

See footnotes at end of table 12.

Table 11. QUANTITY OF SHIPMENTS OF BRICK (BUILDING OR COMMON AND FACE), BY DIVISIONS AND STATES: 1992 AND 1991—Continued

[Thousands of brick: 2-1/4 inch x 3-5/8 inch brick equivalent]

Division and State	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1991					
United States.....	'5,975,437	'1,234,862	'1,585,092	'1,655,800	'1,499,683
New England ¹	70,762	'12,786	19,677	20,029	18,270
Middle Atlantic ²	'405,528	'81,017	'121,977	'114,708	'87,826
East North Central.....	'537,845	'108,943	'151,035	'149,907	'127,960
Ohio.....	'359,460	'81,777	'103,380	'94,458	'79,845
Other (Illinois, Indiana, Michigan, and Wisconsin) ..	178,385	27,166	47,655	55,449	'48,115
West North Central.....	'311,603	'54,841	'84,655	'94,916	'77,191
Kansas and Missouri.....	'122,796	'24,105	'31,475	'35,044	'32,172
Other (Iowa, Minnesota, Nebraska, North Dakota, and South Dakota).....	188,807	30,736	'53,180	59,872	45,019
South Atlantic.....	'2,016,740	'424,693	'522,151	'540,829	'529,067
Maryland and Virginia.....	325,323	60,573	91,625	91,255	81,870
North Carolina.....	832,988	170,169	216,814	229,525	216,480
South Carolina.....	'427,710	'101,960	'101,968	'105,266	'118,516
Other (Delaware, District of Columbia, Florida, Georgia, and West Virginia).....	430,719	91,991	111,744	114,783	112,201
East South Central.....	'1,141,502	'244,471	'299,819	'315,701	'281,511
Alabama.....	479,807	109,830	126,629	119,521	123,827
Kentucky and Tennessee.....	'426,326	'80,132	'114,952	'130,818	'100,424
Mississippi.....	'235,369	'54,509	'58,238	'65,362	'57,260
West South Central.....	'1,000,076	'201,968	'260,714	'276,815	'260,579
Arkansas.....	'191,515	'36,423	'50,827	'55,361	'48,904
Louisiana.....	'51,536	'11,318	'12,323	'15,125	'12,770
Oklahoma.....	'187,887	'41,179	46,508	52,407	'47,793
Texas.....	'569,138	'113,048	'151,056	'153,922	'151,112
Mountain.....	'253,021	'49,045	60,753	'78,617	64,606
Colorado.....	129,789	26,884	36,598	33,032	33,275
Other (Arizona, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming).....	'123,232	'22,161	'24,155	'45,585	'31,331
Pacific ³	'238,360	'57,098	'64,311	'64,278	'52,673
California.....	'131,206	'27,907	'38,950	'36,537	'27,812
Oregon and Washington.....	107,154	29,191	25,361	27,741	24,861

See footnotes at end of table 12.

Table 12. **VALUE OF SHIPMENTS OF BRICK (BUILDING OR COMMON AND FACE), BY DIVISIONS AND STATES: 1992 AND 1991**

[Thousands of brick: 2-1/4 inch x 3-5/8 inch brick equivalent]

Division and State	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992					
United States.....	906,778	184,621	241,789	257,035	223,333
New England ¹	13,877	'2,265	'3,936	'4,204	'3,472
Middle Atlantic ²	68,851	'11,766	'21,269	'19,884	'15,932
East North Central.....	92,026	'18,582	'25,038	'26,494	'21,912
Ohio.....	61,868	'12,660	'16,875	'17,542	'14,791
Other (Illinois, Indiana, Michigan, and Wisconsin) ..	30,158	'5,922	8,163	8,952	7,121
West North Central.....	49,518	'9,105	'13,389	15,152	11,872
Kansas and Missouri.....	18,018	3,391	4,677	5,568	4,382
Other (Iowa, Minnesota, Nebraska, North Dakota, and South Dakota) ..	31,500	'5,714	'8,712	9,584	7,490
South Atlantic.....	270,131	56,237	70,277	75,758	67,859
Maryland and Virginia.....	50,388	'10,785	'13,450	'14,120	'12,033
North Carolina.....	118,513	24,387	'30,944	33,236	'29,946
South Carolina.....	45,254	'10,645	'11,089	'12,001	'11,519
Other (Delaware, District of Columbia, Florida, Georgia, and West Virginia) ..	55,976	'10,420	'14,794	'16,401	'14,361
East South Central.....	147,479	30,361	38,879	41,535	36,704
Alabama.....	68,079	13,493	18,366	19,419	16,801
Kentucky and Tennessee.....	53,150	10,764	14,008	15,331	13,047
Mississippi.....	26,250	'6,104	6,505	6,785	6,856
West South Central.....	171,451	'35,681	43,255	47,953	44,562
Arkansas.....	34,742	6,908	8,649	10,032	9,153
Louisiana.....	10,757	'1,798	'2,856	'3,277	'2,826
Oklahoma.....	25,104	'5,945	'6,052	'6,489	'6,618
Texas.....	100,848	'21,030	'25,698	'28,155	'25,965
Mountain.....	45,289	'10,647	'11,629	'12,408	'10,605
Colorado.....	28,618	'6,434	'7,496	'7,903	'6,785
Other (Arizona, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming) ..	16,671	4,213	4,133	4,505	'3,820
Pacific ³	48,156	'9,977	'14,117	'13,647	'10,415
California.....	28,601	'5,994	8,876	8,036	'5,695
Oregon and Washington.....	19,555	'3,983	'5,241	'5,611	'4,720

See footnotes at end of table.

Table 12. **VALUE OF SHIPMENTS OF BRICK (BUILDING OR COMMON AND FACE), BY DIVISIONS AND STATES: 1992 AND 1991—Continued**

[Thousands of brick: 2-1/4 inch x 3-5/8 inch brick equivalent]

Division and State	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1991					
United States.....	'882,553	'179,761	'235,148	'247,578	'220,066
New England ¹	15,407	'2,918	4,273	4,334	3,882
Middle Atlantic ²	'81,396	'16,317	'24,138	'23,074	'17,867
East North Central.....	'88,185	'16,830	'24,791	'25,094	'21,470
Ohio.....	'62,321	'12,914	'17,907	'17,072	'14,428
Other (Illinois, Indiana, Michigan, and Wisconsin) ..	25,864	3,916	6,884	8,022	7,042
West North Central.....	'53,666	'9,166	'14,862	'16,450	'13,188
Kansas and Missouri.....	'17,489	'3,412	'4,478	'5,048	'4,551
Other (Iowa, Minnesota, Nebraska, North Dakota, and South Dakota).....	36,177	5,754	'10,384	11,402	8,637
South Atlantic.....	'261,106	'54,361	'67,370	'70,904	'68,471
Maryland and Virginia.....	46,161	7,877	12,034	13,706	12,544
North Carolina.....	114,064	23,809	29,696	31,339	29,220
South Carolina.....	'54,467	'12,946	'12,889	'13,464	'15,168
Other (Florida, Delaware, District of Columbia, Georgia, and West Virginia).....	46,414	9,729	12,751	12,395	11,539
East South Central.....	'129,027	'27,771	'33,930	'35,527	'31,799
Alabama.....	52,275	11,732	13,701	13,174	13,668
Kentucky and Tennessee.....	'47,779	'8,989	'12,890	'14,559	'11,341
Mississippi.....	'28,973	'7,050	'7,339	'7,794	'6,790
West South Central.....	'143,028	'28,110	'37,266	'39,818	'37,834
Arkansas.....	28,783	'5,229	7,326	'7,933	8,295
Louisiana.....	'6,804	'1,426	'1,612	'2,034	'1,732
Oklahoma.....	24,938	4,860	6,513	7,373	6,192
Texas.....	'82,503	'16,595	'21,815	'22,478	'21,615
Mountain.....	'48,481	'9,311	11,522	'15,456	'12,192
Colorado.....	24,865	5,070	6,858	6,722	6,215
Other (Arizona, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming).....	'23,616	'4,241	'4,664	'8,734	'5,977
Pacific ³	'62,257	'14,977	'16,996	'16,921	'13,363
California.....	'39,955	'8,820	'11,702	'11,129	'8,304
Oregon and Washington.....	22,302	6,157	5,294	5,792	5,059

¹Revised by 5 percent or more from previously published figures.¹New England Division comprises: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.²Middle Atlantic Division comprises: New York, New Jersey, and Pennsylvania.³No production or shipments were reported for Alaska and Hawaii.

Table 13. PRODUCTION OF CLAY CONSTRUCTION PRODUCTS: 1992 AND 1991

Product description	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992					
Brick (building or common and face)	6,029,428	'1,306,175	1,559,716	1,633,080	'1,530,457
Facing tile (structural) and ceramic glazed brick, including unglazed and salt brick	42,967	'10,340	'11,030	'10,798	'10,799
Structural clay tile (except facing)	(D)	(D)	(D)	(D)	(D)
Clay floor and wall tile, including quarry tile	487,996	119,410	121,174	122,158	125,254
Glazed floor and wall tile having a facial area greater than 6 and less than 59 square inches AND					
Glazed floor and wall tile having a facial area 59 square inches or greater	373,747	91,022	92,731	'92,589	97,405
Glazed and unglazed ceramic mosaic tile having a facial area greater than 6 square inches	50,099	'12,314	'12,150	'13,192	'12,443
Unglazed tile, including unglazed quarry tile having a facial area greater than 6 square inches	64,150	16,074	16,293	16,377	'15,406
Vitrified clay sewer pipe and fittings	163,996	'40,292	'39,029	'39,842	'44,833
1991					
Brick (building or common and face)	'5,939,091	'1,370,005	'1,498,768	'1,561,790	'1,508,528
Facing tile (structural) and ceramic glazed brick, including unglazed and salt brick	'31,811	'7,663	'7,863	'8,146	'8,139
Structural clay tile (except facing)	(D)	(D)	(D)	(D)	(D)
Clay floor and wall tile, including quarry tile	'477,693	'116,504	'118,150	'117,408	'125,631
Glazed floor and wall tile having a facial area greater than 6 and less than 59 square inches AND					
Glazed floor and wall tile having a facial area 59 square inches or greater	336,967	81,028	'83,066	82,184	'90,689
Glazed and unglazed ceramic mosaic tile having a facial area greater than 6 square inches	62,150	15,565	15,978	16,152	14,455
Unglazed tile, including unglazed quarry tile having a facial area greater than 6 square inches	'78,576	'19,911	'19,106	'19,072	'20,487
Vitrified clay sewer pipe and fittings	205,760	52,730	55,079	54,023	43,928

See footnotes at end of table 15.

Table 14. QUANTITY OF SHIPMENTS OF CLAY CONSTRUCTION PRODUCTS: 1992 AND 1991

Product description	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992					
Brick (building or common and face)	6,166,976	'1,284,611	'1,641,278	1,733,173	'1,507,914
Facing tile (structural) and ceramic glazed brick, including unglazed and salt brick	46,885	'11,665	'12,105	'11,680	'11,435
Structural clay tile (except facing)	(D)	(D)	(D)	(D)	(D)
Clay floor and wall tile, including quarry tile	495,676	119,234	123,091	'130,025	'123,326
Glazed floor and wall tile having a facial area greater than 6 and less than 59 square inches AND					
Glazed floor and wall tile having a facial area 59 square inches or greater	375,256	'89,606	'92,434	'97,406	'95,810
Glazed and unglazed ceramic mosaic tile having a facial area greater than 6 square inches	58,268	'14,569	'14,616	'15,568	'13,515
Unglazed tile, including unglazed quarry tile having a facial area greater than 6 square inches	62,152	15,059	16,041	17,051	14,001
Vitrified clay sewer pipe and fittings	157,434	40,055	39,386	39,928	38,065
1991					
Brick (building or common and face)	'5,975,437	'1,234,862	'1,585,092	'1,655,800	'1,499,683
Facing tile (structural) and ceramic glazed brick, including unglazed and salt brick	'31,900	'7,336	'8,272	'8,139	'8,153
Structural clay tile (except facing)	(D)	(D)	(D)	(D)	(D)
Clay floor and wall tile, including quarry tile	'484,790	'118,620	'119,125	'119,546	'127,499
Glazed floor and wall tile having a facial area greater than 6 and less than 59 square inches AND					
Glazed floor and wall tile having a facial area 59 square inches or greater	'347,257	'85,062	'84,879	'85,213	'92,103
Glazed and unglazed ceramic mosaic tile having a facial area greater than 6 square inches	60,102	14,935	15,426	15,730	14,011
Unglazed tile, including unglazed quarry tile having a facial area greater than 6 square inches	'77,431	'18,623	'18,820	'18,603	'21,385
Vitrified clay sewer pipe and fittings	195,627	47,561	51,310	52,933	43,823

See footnotes at end of table 15.

Table 15. VALUE OF SHIPMENTS OF CLAY CONSTRUCTION PRODUCTS: 1992 AND 1991

Product description	Total	First quarter	Second quarter	Third quarter	Fourth quarter
1992					
Brick (building or common and face)	906,778	184,621	241,789	257,035	223,333
Facing tile (structural) and ceramic glazed brick, including unglazed and salt brick	19,142	'4,556	'5,098	'4,900	'4,588
Structural clay tile (except facing)	(D)	(D)	(D)	(D)	(D)
Clay floor and wall tile, including quarry tile	640,049	152,646	162,764	167,197	157,442
Glazed floor and wall tile having a facial area greater than 6 and less than 59 square inches AND					
Glazed floor and wall tile having a facial area 59 square inches or greater	467,486	110,538	118,385	121,532	117,031
Glazed and unglazed ceramic mosaic tile having a facial area greater than 6 square inches	90,315	21,880	23,264	23,907	21,264
Unglazed tile, including unglazed quarry tile having a facial area greater than 6 square inches	82,248	20,228	21,115	'21,758	19,147
Vitrified clay sewer pipe and fittings	37,590	9,631	'9,298	'9,497	'9,164
1991					
Brick (building or common and face)	'882,553	'179,761	'235,148	'247,578	'220,066
Facing tile (structural) and ceramic glazed brick, including unglazed and salt brick	'14,105	'3,262	'3,916	'3,461	'3,466
Structural clay tile (except facing)	(D)	(D)	(D)	(D)	(D)
Clay floor and wall tile, including quarry tile	'638,640	'157,415	'160,053	'153,915	'167,257
Glazed floor and wall tile having a facial area greater than 6 and less than 59 square inches AND					
Glazed floor and wall tile having a facial area 59 square inches or greater	'438,960	'109,030	'109,964	'103,786	'116,180
Glazed and unglazed ceramic mosaic tile having a facial area greater than 6 square inches	92,980	23,349	24,219	24,345	21,067
Unglazed tile, including unglazed quarry tile having a facial area greater than 6 square inches	'106,700	'25,036	'25,870	'25,784	'30,010
Vitrified clay sewer pipe and fittings	50,565	12,637	13,061	13,607	11,260

(D) Data withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously published figures.

Table 16. SHIPMENTS, EXPORTS, AND IMPORTS OF SELECTED CLAY CONSTRUCTION PRODUCTS: 1992 AND 1991

[Value in thousands of dollars]

Product code	Product description	Unit of measure	Manufacturers' shipments		Exports of domestic merchandise ^{1 2}		Percent exports to manufacturers' shipments ¹		Imports for consumption ⁴		Apparent consumption ⁶		Percent imports to apparent consumption	
			Quantity	Value (f.o.b. plant)	Quantity	Value (at port)	Quantity	Value ³	Quantity	Value ⁵	Quantity	Value ³	Quantity	Value
1992														
32510 11	Brick (building or common and face)	Thousand brick	6,166,976	906,778	47,655	8,136	0.8	0.9	11,872	1,978	6,131,193	900,620	0.2	0.2
32510 31, 61	Facing tile and structural clay tile	.....do.....	(D)	(D)	(X)	3,212	(X)	(D)	(X)	1,789	(X)	(D)	(X)	(D)
32530 20	Ceramic mosaic tile	Thousand sq. meters	5,420	90,315	959	4,380	17.7	4.8	2,817	34,155	7,278	120,090	38.7	28.4
32530 05, 15, 30	Clay floor and wall tile ⁷	.....do.....	40,689	549,734	(X)	14,901	(X)	2.7	47,398	463,015	(X)	997,848	(X)	46.4
32591 00	Vitrified clay sewer pipe and fittings	Metric tons	142,733	37,590	383	1,229	0.3	3.3	614	504	142,964	36,865	0.4	1.4
1991														
32510 11	Brick (building or common and face)	Thousand brick	5,975,437	882,553	41,545	6,952	0.7	0.8	13,322	2,119	5,947,214	877,720	0.2	0.2
32510 31, 61	Facing tile and structural clay tile	.....do.....	(D)	(D)	(X)	3,805	(X)	(D)	(X)	2,595	(X)	(D)	(X)	(D)
32530 20	Ceramic mosaic tile	Thousand sq. meters	5,591	92,980	1,118	5,357	20.0	5.8	2,454	32,333	6,927	119,956	35.4	27.0
32530 05, 15, 30	Clay floor and wall tile ⁷	.....do.....	39,506	545,660	(X)	15,616	(X)	2.9	41,480	466,471	(X)	996,515	(X)	46.8
32591 00	Vitrified clay sewer pipe and fittings	Metric tons	177,359	50,565	217	1,380	0.1	2.7	630	765	177,772	49,950	0.4	1.5

(D) Data withheld to avoid disclosing figures for individual companies. (X) Not applicable.

¹For comparison of Standard Industrial Classification (SIC)-based codes with Schedule B export numbers and HTSUSA import numbers, see appendix C.²Source: Bureau of the Census report EM 545, U.S. Exports.³Value calculations are based on the estimated producers' value of exports.⁴Source: Bureau of the Census report IM 146, U.S. Imports for Consumption.⁵The dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry into the United States.⁶Apparent consumption is derived by subtracting exports from the total of shipments plus imports including duty.⁷Excluding ceramic mosaic tile.

HISTORICAL NOTE

Data on clay products have been collected by the Bureau of the Census since 1947. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact John Miller, 301-763-7837 or Robert Miller, 301-763-4484.

3.4 PLUMBING FIXTURES

INTRODUCTION

The data in this section are from a survey of all companies engaged in the manufacture of plumbing fixtures in the United States. The statistics were collected by mail on Bureau of the Census quarterly Form MQ34E, Plumbing Fixtures. The survey panel includes all known manufacturers of plumbing fixtures, approximately 215 companies.

SUMMARY OF FINDINGS

Manufacturers' shipments of plumbing fixtures during 1992 were valued at \$2,474 million. This represents a 7-percent increase from the 1991 level of \$2,311 million.

Shipments of flush tanks increased 7 percent from 7.1 million units in 1991 to 7.6 million units in 1992. Kitchen sink shipments increased 6 percent from 4.1 million units in 1991, to 4.4 million units in 1992.

EXPLANATION OF TERMS

Definitions of Plumbing Fixtures. The products covered are classified by the standards set by the American National Standards Institute.

Table 17. **SHIPMENTS OF SELECTED TYPES OF PLUMBING FIXTURES: 1988 TO 1992**

[Quantity in thousands of units]

Product description	1992	1991	1990	1989	1988
Lavatories	6,200	6,045	7,096	7,744	7,845
Vitreous china and other nonmetals	4,436	4,386	5,226	5,643	5,923
Cast iron	489	501	635	-	696
Steel	1,275	1,158	1,235	2,101	1,226
Water closet bowls	8,263	8,064	8,311	9,421	8,968
Flushtanks	7,649	7,129	7,934	8,683	8,157
Kitchen sinks	4,400	4,132	4,491	4,590	4,952
Cast iron	696	634	665	658	579
Steel and other materials	3,704	3,498	3,826	3,932	4,373
Bathtubs	3,177	3,047	3,300	3,923	4,026
Cast iron ¹	1,308	365	421	485	619
Steel	(¹)	726	845	1,054	956
Plastic and all other materials	1,869	1,956	2,034	2,384	2,451
Whirlpool baths	327	254	270	258	283

- Represents zero.

¹The data for "Bathtubs, steel (enameled)" are included with "Bathtubs, cast iron (enameled)" to avoid disclosing figures for individual companies.

Table 18. VALUE OF SHIPMENTS OF PLUMBING FIXTURES, BY MATERIAL: 1989 TO 1992

[Value in thousands of dollars]

Product description	1992	1991	1990	1989
Total	2,474,074	2,311,147	2,475,606	2,562,919
Metal	525,183	545,054	564,818	579,761
Cast iron	249,371	230,377	248,285	265,054
Steel and other metal	275,812	314,677	316,533	314,707
Vitreous china	713,107	726,392	827,884	821,851
Fiberglass	784,841	708,031	682,664	751,949
Gel coat	340,056	370,513	378,086	397,908
Acrylic	444,785	337,518	304,578	354,041
Plastics	183,386	196,981	212,735	249,734
Cultured marble	94,342	82,234	106,526	132,469
Other	89,044	114,747	106,209	117,265
All other materials, nonmetal ¹	267,557	134,689	187,505	159,624

¹Includes plumbing fixtures n.s.k. (not specified by kind).

Table 19. QUANTITY OF SHIPMENTS OF PLUMBING FIXTURES: 1989 TO 1992

[Quantity in thousands of units]

Quarter and year	Lavatories	Water closet bowls	Flush tanks	Kitchen sinks	Bathtubs	Whirlpool baths
1992						
Total	6,200	8,263	7,649	4,400	3,176	328
First quarter	1,532	2,073	1,873	1,121	752	75
Second quarter	1,602	2,043	1,830	1,137	802	87
Third quarter	1,552	2,126	2,010	1,132	809	90
Fourth quarter	1,514	2,021	1,936	1,010	813	76
1991						
Total	7,096	8,310	7,130	4,133	3,046	254
First quarter	1,452	1,950	1,727	988	655	59
Second quarter	1,530	2,069	1,790	1,080	787	66
Third quarter	1,611	2,156	1,918	1,081	846	68
Fourth quarter	1,451	1,890	1,695	984	758	61
1990						
Total	7,096	8,310	7,934	4,491	3,296	271
First quarter	1,830	2,213	2,031	1,165	824	69
Second quarter	1,900	2,116	2,041	1,250	905	74
Third quarter	1,814	2,075	1,959	1,098	853	72
Fourth quarter	1,552	1,906	1,903	978	714	56
1989						
Total	7,745	9,420	8,683	4,590	3,923	257
First quarter	1,976	2,329	2,113	1,129	970	61
Second quarter	2,082	2,496	2,261	1,231	1,023	68
Third quarter	1,844	2,417	2,214	1,105	1,002	68
Fourth quarter	1,843	2,178	2,095	1,125	928	60

Note: Detail may not add to totals due to independent rounding.

Table 20. TOTAL PRODUCTION AND SHIPMENTS OF PLUMBING FIXTURES: 1992 AND 1991

[Quantity in units; value in thousands of dollars]

Product code	Product description	Company count	Total 1992			Total 1991		
			Quantity produced	Shipments		Quantity produced	Shipments	
				Quantity	Value		Quantity	Value
	Plumbing fixtures	(NA)	(X)	(X)	2,474,074	(X)	(X)	2,311,147
	Drinking fountains ¹	(NA)	43,814	42,285	8,980	59,417	58,595	18,833
34310 15	Metal	8	(³)	(³)	(³)	39,594	39,721	13,626
32610 12	Vitreous china ²	4	(³)	(³)	(³)	19,823	18,874	5,207
19001 12	All other materials ³	3	43,814	42,285	8,980	(³)	(³)	(³)
	Lavatories	(NA)	8,487,298	8,199,773	297,998	8,152,137	8,044,666	286,816
34310 17	Cast-iron (enameled)	3	496,091	489,337	38,580	486,738	501,145	38,984
34310 18	Steel (enameled)	6	1,189,602	1,248,305	21,108	1,127,855	1,133,358	18,427
34310 19	Steel (stainless)	8	26,202	26,469	8,810	24,854	24,345	8,218
32610 17	Vitreous china	13	2,949,546	2,677,995	131,590	2,598,501	2,498,656	115,763
30880 04	Cultured marble	59	1,585,045	1,504,832	83,419	1,649,242	1,605,814	89,046
30880 31	Other plastics ⁴	7	260,810	253,035	14,491	264,947	281,348	16,378
19001 03	All other materials	2	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
	Water closet bowls (vitreous china)	(NA)	8,733,226	8,263,440	423,474	8,365,077	8,064,205	408,859
19002 02	1.6 or less g.p.f. low consumption (any material)	10	972,537	1,049,554	78,867	602,863	617,027	57,304
32610 21	Flushometer	12	557,550	557,284	38,873	575,398	568,294	36,440
32610 24	One piece	10	1,027,986	945,920	90,116	1,012,342	998,208	98,973
32610 27	Close couple (for use with flush tank) ..	12	6,123,156	5,656,855	201,537	6,120,870	5,825,541	202,172
19001 04	All other materials	5	51,997	53,827	14,081	53,604	55,135	13,970
32610 31	Flush tanks (vitreous china)	12	7,998,452	7,649,189	224,672	7,320,129	7,129,425	199,167
	Urinals	(NA)	228,282	233,141	24,527	236,608	229,099	24,651
34310 38	Metal	8	3,686	3,768	1,562	4,147	3,949	1,687
32610 36	Vitreous china	11	224,596	229,373	22,965	232,461	225,150	22,964
	Kitchen sinks, not including bar sinks	(NA)	4,411,767	4,400,320	254,372	4,098,359	4,132,278	237,512
34310 41	Cast iron (enameled)	3	703,322	696,207	97,852	646,384	633,673	86,756
34310 42	Steel (enameled)	7	388,096	411,699	11,339	336,393	338,139	8,555
34310 47	Steel (stainless) ⁵	7	3,320,349	3,292,414	145,181	3,115,582	3,160,466	142,201
19001 07	All other materials	2	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
19001 08	Bar sinks (all materials)	10	318,354	318,787	15,316	314,508	317,876	16,584
	Wash sinks and service sinks, mop sinks, sink and laundry tray combinations, and laundry trays	(NA)	440,719	434,450	30,179	449,145	449,803	29,856
34310 54	Metal ⁶	7	431,117	425,893	27,483	428,412	428,621	20,122
30880 33	Plastics	4	(⁷)	(⁷)	(⁷)	(⁷)	(⁷)	(⁷)
32610 54	Vitreous china	4	9,602	8,557	2,696	8,068	8,499	2,388
32722 84	Concrete and all other materials	3	(⁷)	(⁷)	(⁷)	12,665	12,683	7,346
	Bathtubs, including wall surrounds when sold as combined units, not including whirlpool baths	(NA)	3,049,770	3,176,901	449,287	2,977,482	3,046,032	436,236
34310 61	Cast-iron (enameled) ⁸	3	1,151,918	1,307,817	155,621	349,917	364,626	78,921
34310 62	Steel (enameled)	5	(⁸)	(⁸)	(⁸)	711,296	725,599	52,610
30880 12	Fiberglass (FRP) gel coat	25	1,487,698	1,484,230	231,550	1,542,762	1,583,861	249,131
30880 13	Fiberglass (FRP) acrylic	21	134,047	126,153	39,926	132,120	135,206	35,896
30880 14	Cultured marble	30	12,282	9,174	3,967	7,719	7,576	3,478
30880 01	Other plastics (PVC, ABS) ⁹	10	263,825	249,527	18,223	233,668	229,164	16,200
19001 09	All other materials	1	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
	Shower receptors, sold separately	(NA)	371,181	369,496	18,208	383,779	379,340	17,704
30886 55	Plastics	17	358,284	357,932	15,208	374,351	370,408	15,862
19001 10	All other materials	17	12,897	11,564	3,000	9,428	8,932	1,842
	Shower stalls, including receptor	(NA)	827,905	801,657	125,142	696,201	717,813	104,370
34310 74	Metal	1	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
30880 21	Fiberglass (FRP) gel coat ¹⁰	22	531,296	517,232	90,471	381,318	400,276	70,888
30880 22	Fiberglass (FRP) acrylic	11	212,165	200,450	28,382	240,426	242,413	28,290
30880 23	Plastics	10	82,445	82,043	5,279	73,318	73,983	4,585
19001 11	All other materials	8	1,999	1,932	1,010	1,139	1,141	607
	Wall surrounds, sold as separate units ..	(NA)	1,034,893	985,897	72,790	1,020,403	1,025,847	72,827
30880 04	Showers (all materials)	31	431,993	422,882	26,579	254,183	250,022	22,670
30880 06	Bathtubs (all materials)	30	602,900	563,015	46,211	766,220	775,825	50,157
19222 08	Bidets (all materials)	8	64,265	62,912	6,410	54,001	46,210	5,887
	Whirlpool baths, not spas or hot tubs (noninstitutional)	(NA)	327,818	327,360	238,715	263,379	254,170	198,644
34310 86	Cast-iron (enameled) ¹¹	3	26,691	28,930	15,750	37,119	28,770	17,930
30880 26	Fiberglass (FRP) gel coat	18	31,704	30,038	18,247	28,389	29,370	22,912
30880 27	Fiberglass (FRP) acrylic	25	227,721	225,730	178,925	168,077	167,320	135,922
30880 28	Cultured marble	6	7,161	7,042	6,956	6,614	6,584	6,820
30886 29	Plastics	8	34,541	35,620	18,837	23,180	22,126	15,060
19001 12	All other materials	4	(¹¹)	(¹¹)	(¹¹)	(¹¹)	(¹¹)	(¹¹)

See footnotes at end of table.

Table 20. TOTAL PRODUCTION AND SHIPMENTS OF PLUMBING FIXTURES: 1992 AND 1991—Continued

[Quantity in units; value in thousands of dollars]

Product code	Product description	Company count	Total 1992			Total 1991		
			Quantity produced	Shipments		Quantity produced	Shipments	
				Quantity	Value		Quantity	Value
19001 13	Hot tubs (noninstitutional, all materials) . .	1	(¹²)	(¹²)	(¹²)	(¹²)	(¹²)	(¹²)
19001 15	Spas (noninstitutional, all materials) ¹² . . .	23	83,089	83,148	214,978	77,646	76,820	187,511
	All other fixtures not described above . . .	(NA)	(X)	(X)	69,026	(X)	(X)	65,690
30882 20	Plastic	8	(X)	(X)	7,936	(X)	(X)	7,664
19002 20	All other materials	11	(X)	(X)	61,090	(X)	(X)	58,026

(NA) Not available. (X) Not applicable.

¹The data for "Drinking fountains, metal" and "Drinking fountains, vitreous china" are included with "Drinking fountains, all other materials" in 1992 to avoid disclosing figures for individual companies.²The data for "Drinking fountains, all other materials" are included with "Drinking fountains, vitreous china" in 1991 to avoid disclosing figures for individual companies.³The data for "Drinking fountains, metal and vitreous china" are included with "Drinking fountains, all other materials" in 1992.⁴The data for "Lavatories, all other materials" are included with "Lavatories, other plastics" to avoid disclosing figures for individual companies.⁵The data for "Kitchen sinks, all other materials" are included with "Kitchen sinks, stainless steel" to avoid disclosing figures for individual companies.⁶The data for "Wash sinks, plastics" are included in "Wash sinks, metal" in 1991 to avoid disclosing figures for individual companies.⁷The data for "Wash sinks, plastics" and "Wash sinks, concrete and all other materials" are included in "Wash sinks, metal" in 1992 to avoid disclosing figures for individual companies.⁸The data for "Bathtubs, steel (enameled)" are included with "Bathtubs, cast-iron (enameled)" in 1992 to avoid disclosing figures for individual companies.⁹The data for "Bathtubs, all other materials" are included with "Bathtubs, other plastics (PVC, ABS)" to avoid disclosing figures for individual companies.¹⁰The data for "Shower stalls, metal" are included with "Shower stalls, fiberglass (FRP) gel coat" to avoid disclosing figures for individual companies.¹¹The data for "Whirlpool baths, all other materials" are included with "Whirlpool baths, cast iron (enameled)" to avoid disclosing figures for individual companies.¹²The data for "Hot tubs" are included with "Spas" to avoid disclosing figures for individual companies.

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Table 21. PRODUCTION, SHIPMENTS,

[Quantity in units; value

Line no.	Product code	Product description	Company count	First quarter			Second quarter				
				Quantity produced	Shipments		Stocks, end of quarter	Quantity produced	Shipments		Stocks end of quarter
					Quantity	Value			Quantity	Value	
1		Plumbing fixtures	(NA)	(X)	(X)	586,908	(X)	(X)	(X)	638,504	(X)
2		Drinking fountains ¹	(NA)	9,985	9,649	2,052	1,204	13,323	13,144	2,728	1,187
3	34310 15	Metal AND	6								
4	32610 12	Vitreous china AND	4								
5	19001 02	All other materials	3	9,985	9,649	2,052	1,204	13,323	13,144	2,728	1,187
6		Lavatories	(NA)	1,671,803	1,532,355	74,102	1,068,786	1,692,166	1,602,394	77,657	1,155,812
7	34310 17	Cast-iron (enameled)	3	138,375	131,519	10,310	39,417	144,804	123,883	9,804	57,779
8	34310 18	Steel (enameled)	6	284,384	312,030	5,125	71,297	298,401	319,402	5,310	82,719
9	34310 19	Steel (stainless)	6	^a 6,605	^a 6,549	^b 2,179	591	^b 6,017	^b 6,602	^b 2,213	^a 324
10	32610 17	Vitreous china	13	724,006	646,581	32,131	836,423	759,609	680,345	33,549	882,911
11	30880 04	Cultured marble	59	459,553	^c 370,412	20,561	114,179	^a 405,238	^a 407,388	^a 23,084	^c 113,468
12	30880 31	Other plastics ²	7	^a 58,880	^a 55,264	^b 3,796	^b 6,879	^b 78,097	^b 64,774	^b 3,697	^b 18,611
13	19001 03	All other materials	2	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
14		Water closet bowls (vitreous china) . 1.6 or less g.p.f. low consumption (any material)	(NA)	2,238,955	2,072,986	100,824	3,325,136	^c 2,230,313	2,043,004	^c 104,878	3,415,975
15	19002 02	Flushometer	10	183,239	172,780	^c 11,941	210,881	196,820	^c 218,611	^c 17,217	198,977
16	32610 21	One piece	12	142,542	138,104	9,419	120,194	144,655	141,186	9,761	110,910
17	32610 24	Close couple (for use with flush tank)	10	288,869	^c 242,292	23,202	193,052	^b 266,107	^b 249,980	23,823	^a 207,108
18	32610 27	All other materials	12	1,611,181	^c 1,506,004	52,753	2,799,010	1,609,807	1,419,392	50,560	^a 2,897,784
19	19001 04	Flush tanks (vitreous china)	5	^b 13,124	^b 13,806	^a 3,509	^a 1,999	^b 12,924	^b 13,835	^a 3,517	^a 1,196
20	32610 31	Urinals	12	1,914,166	1,873,390	53,996	1,115,295	^a 2,041,836	^a 1,830,193	^c 53,825	1,251,119
21		Metal	(NA)	56,705	58,744	6,273	59,332	56,061	58,559	6,085	57,322
22	34310 38	Vitreous china	8	848	933	382	237	887	921	382	225
23	32610 36	Kitchen sinks, not including bar sinks	11	55,857	57,811	5,891	59,095	55,174	57,638	5,703	57,097
24		Cast iron (enameled)	(NA)	1,148,139	1,121,258	64,735	274,140	1,159,200	1,137,246	65,234	303,996
25	34310 41	Steel (enameled)	3	193,879	179,607	24,900	51,906	202,371	179,228	25,277	73,998
26	34310 42	Steel (stainless) ³	7	88,464	85,581	2,316	27,837	111,044	114,636	3,037	39,223
27	34310 47	All other materials	7	865,796	856,070	37,519	194,397	^a 845,785	^a 843,382	^a 36,920	^b 190,775
28	19001 07	Bar sinks (all materials)	2	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)
29	19001 08	Wash sinks and service sinks, mop sinks, sink and laundry tray combinations, and laundry trays	10	80,993	81,512	^c 3,887	16,655	^a 85,164	^a 82,084	^c 4,006	^a 19,421
30		Metal ⁴	(NA)	119,813	118,627	7,562	6,931	126,177	123,652	^a 7,821	9,157
31	34310 54	Plastics	7	117,499	116,288	^c 6,907	^c 5,014	123,851	121,332	7,171	7,245
32	30880 33	Vitreous china	4	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
33	32610 54	Concrete and all other materials ..	4	2,314	2,339	655	1,917	2,326	2,320	650	1,912
34	32722 84	Bathtubs, including wall surrounds when sold as combined units, not including whirlpool baths	3	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
35		Cast-iron (enameled) ⁵	(NA)	729,249	752,066	106,508	112,412	766,575	802,150	110,886	^c 115,630
36	34310 61	Steel (enameled)	3	287,761	306,499	37,267	48,515	297,938	^c 341,117	^c 38,117	51,914
37	34310 62	Fiberglass (FRP) gel coat	5	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
38	30880 12	Fiberglass (FRP) acrylic	25	^c 340,342	^c 346,277	^c 53,836	^c 37,716	^c 368,006	^c 363,430	^c 57,137	^a 37,911
39	30880 13	Cultured marble	21	^c 32,626	32,933	9,814	4,350	^c 33,778	^c 30,977	^c 9,985	^c 4,194
40	30880 14	Other plastics (PVC, ABS) ⁶	30	1,821	1,988	913	160	^b 3,078	^b 2,179	^b 933	^b 294
41	30880 01	All other materials	10	^c 66,699	^c 64,369	^a 4,678	^a 21,671	^b 63,775	^b 64,447	^b 4,714	^b 21,317
42	19001 09	Shower receptors, sold separately ..	1	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)
43		Plastics	(NA)	86,799	83,411	4,192	12,080	118,284	^c 113,960	5,449	^c 13,669
44	30886 55	All other materials	17	83,948	80,722	3,499	^a 11,287	^b 115,749	^b 111,547	^b 4,791	^b 12,736
45	19001 10	Shower stalls, including receptor ...	17	^c 2,851	^c 2,689	^c 693	793	^b 2,535	^b 2,413	^b 658	^b 933
46		Metal	(NA)	235,206	224,512	34,227	23,623	^c 214,365	^c 208,099	^a 32,650	^a 14,731
47	34310 74	Fiberglass (FRP) gel coat ⁷	1	(⁷)	(⁷)	(⁷)	(⁷)	(⁷)	(⁷)	(⁷)	(⁷)
48	30880 21	Fiberglass (FRP) acrylic	22	^c 152,476	145,764	25,303	18,484	^c 143,310	^c 139,649	^c 23,985	^c 10,307
49	30880 22	Plastics	11	^c 59,681	^c 56,060	^c 7,136	^c 4,177	^c 50,569	^c 48,049	^c 7,153	^a 3,431
50	30880 23	All other materials	10	22,582	22,232	^b 1,558	^b 921	19,947	19,884	^a 1,224	^c 949
51	19001 11	Wall surrounds, sold as separate units	8	^b 467	^c 456	^c 230	41	^a 539	^a 517	^b 288	^c 44
52		Showers (all materials)	(NA)	258,917	^c 253,353	^c 16,638	^c 44,241	^c 275,906	^c 268,735	^c 20,781	^c 54,261
53	30880 04	Bathtubs (all materials)	31	^c 97,683	^c 98,909	^c 6,117	^b 8,920	^b 105,151	^b 106,030	^b 6,638	^b 10,566
54	30880 06	Bidets (all materials)	30	^a 161,234	^a 154,444	^a 10,521	^b 35,321	^b 170,755	^b 162,705	^b 14,143	^b 43,695
55	19222 08		8	^c 15,804	14,553	1,544	^c 16,605	^c 18,220	^c 16,261	1,645	^c 16,518

See footnotes at end of table.

AND STOCKS OF PLUMBING FIXTURES: 1992

in thousands of dollars]

Third quarter				Fourth quarter				Line no.
Quantity produced	Shipments		Stocks end of quarter	Quantity produced	Shipments		Stocks end of quarter	
	Quantity	Value			Quantity	Value		
(X)	(X)	646,536	(X)	(X)	(X)	602,126	(X)	1
12,283	12,473	2,706	1,133	8,223	8,999	1,494	1,256	2
								3
								4
12,283	12,473	2,706	1,133	*8,223	6,999	*1,494	1,256	5
1,582,508	1,551,490	74,420	1,143,602	1,540,819	1,513,534	71,819	1,151,748	6
106,522	121,181	9,497	44,987	106,390	112,754	8,969	40,678	7
272,376	313,178	5,597	67,131	314,441	303,695	5,076	78,727	8
^b 7,184	^b 6,805	^b 2,253	^a 455	6,396	6,513	2,165	^a 361	9
725,561	675,314	32,939	879,582	'740,370	675,755	32,971	909,186	10
^a 400,587	^a 370,738	^a 20,510	'128,434	'319,667	356,094	'19,264	103,472	11
^b 70,278	^b 64,274	^b 3,624	23,013	'53,555	^a 58,723	3,374	19,324	12
(^c)	(^c)	(^c)	(^c)	(^c)	(^c)	(^c)	(^c)	13
2,076,943	2,126,578	107,469	3,306,058	2,187,015	2,020,872	'110,303	3,355,501	14
'250,581	293,772	'22,373	157,946	341,897	364,391	'27,336	'151,096	15
116,780	137,564	9,606	104,562	153,573	140,430	10,087	114,043	16
^b 253,036	^b 225,247	^a 21,345	^a 214,935	219,974	228,401	21,746	208,089	17
1,443,597	'1,456,935	50,627	^b 2,827,424	1,458,571	1,274,524	47,597	2,881,101	18
^b 12,949	^b 13,060	^a 3,518	^a 1,191	^b 13,000	^b 13,126	^a 3,537	^a 1,172	19
^a 1,976,307	^a 2,009,847	^a 59,339	1,165,559	2,066,143	1,935,759	57,512	1,218,667	20
57,245	61,535	6,419	54,063	58,271	54,303	5,750	57,566	21
958	1,021	426	200	993	893	372	290	22
56,287	60,514	5,993	53,863	57,278	53,410	5,378	57,276	23
1,096,153	1,131,914	65,183	286,865	1,008,275	1,009,902	59,220	287,000	24
156,099	172,389	24,158	61,349	150,973	164,983	23,517	54,883	25
83,844	110,697	3,095	24,807	104,744	100,785	2,891	28,766	26
^a 856,210	^a 848,828	^a 37,930	^a 200,709	752,558	744,134	^a 32,812	203,351	27
(^c)	(^c)	(^c)	(^c)	(^c)	(^c)	(^c)	(^c)	28
^a 76,699	^a 79,380	3,762	^a 16,583	^a 75,498	^a 75,811	'3,661	^a 16,064	29
99,246	97,197	7,337	7,353	95,483	94,974	7,459	'7,636	30
96,869	95,735	^a 6,666	5,402	92,898	92,538	6,739	'5,430	31
(^d)	(^d)	(^d)	(^d)	(^d)	(^d)	(^d)	(^d)	32
2,377	1,462	671	1,951	2,585	2,436	720	2,206	33
(^d)	(^d)	(^d)	(^d)	(^d)	(^d)	(^d)	(^d)	34
761,862	809,411	114,553	101,118	792,084	'813,274	'117,340	'114,779	35
276,381	332,243	39,172	37,271	289,838	327,958	41,065	46,070	36
(^e)	(^e)	(^e)	(^e)	(^e)	(^e)	(^e)	(^e)	37
'384,802	'381,879	'59,342	^a 37,583	'394,548	'392,644	'61,235	'36,943	38
'34,822	'32,282	10,504	'4,257	'32,821	29,961	'9,623	4,532	39
^b 3,578	^b 2,569	^b 1,103	^b 447	3,805	2,438	1,018	'641	40
^b 62,279	^b 60,438	^b 4,432	^b 21,560	'71,072	'60,273	'4,399	^a 26,593	41
(^e)	(^e)	(^e)	(^e)	(^e)	(^e)	(^e)	(^e)	42
84,333	86,478	4,205	12,767	'81,765	'85,647	4,362	'11,381	43
80,615	83,845	3,490	11,737	'77,972	'81,818	'3,428	'10,600	44
^a 3,718	^b 2,633	^a 715	1,030	3,793	3,829	'934	'781	45
210,308	206,042	33,194	13,506	168,026	'163,004	25,071	'14,442	46
(^f)	(^f)	(^f)	(^f)	(^f)	(^f)	(^f)	(^f)	47
'142,718	140,571	^a 24,634	^a 9,705	'92,792	91,248	16,549	'10,115	48
'47,137	'45,078	'7,082	'2,849	'54,778	'51,263	7,011	'3,353	49
19,952	19,909	^a 1,231	910	19,964	20,018	1,266	'929	50
^a 501	^a 484	^b 247	42	'492	'475	^a 245	'45	51
247,666	'228,940	'17,456	'63,815	252,404	'234,869	'17,915	'74,243	52
^b 111,454	^b 105,706	'6,658	^b 12,335	'117,705	'112,237	'7,166	'14,224	53
^b 136,212	^b 123,234	^b 10,798	^b 51,480	'134,699	122,632	^a 10,749	'60,019	54
12,719	^a 15,025	^a 1,521	14,552	^a 17,522	'17,073	1,700	14,660	55

Table 21. PRODUCTION, SHIPMENTS,

[Quantity in units; value

Line no.	Product code	Product description	Company count	First quarter				Second quarter			
				Quantity produced	Shipments		Stocks, end of quarter	Quantity produced	Shipments		Stocks end of quarter
					Quantity	Value			Quantity	Value	
56		Whirlpool baths, not spas or hot tubs (noninstitutional)	(NA)	79,092	74,638	52,989	22,408	80,176	86,649	63,620	^a 15,613
57	34310 86	Cast-iron (enameled) ⁶	3	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)	1,340
58	30880 26	Fiberglass (FRP) gel coat	18	^a 6,733	^a 6,602	^a 4,066	^a 2,025	^b 8,427	^b 8,040	^b 4,873	^b 1,779
59	30880 27	Fiberglass (FRP) acrylic	25	^a 51,976	^a 46,717	^a 38,316	14,094	^a 53,228	^a 61,279	^a 48,121	^a 8,877
60	30880 28	Cultured marble	6	1,520	1,553	1,542	^a 22	^b 1,877	^b 1,873	^b 1,850	^b 24
61	30886 29	Plastics	8	^a 11,250	11,810	4,517	1,459	^b 7,086	^b 7,945	^b 4,750	^b 1,088
62	19001 12	All other materials	4	7,613	7,956	4,548	4,808	^b 6,558	^b 7,512	4,026	^b 3,845
63	19001 13	Hot tubs (noninstitutional, all materials)	1	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)
64	19001 15	Spas (noninstitutional, all materials) ⁸	23	^a 16,789	16,036	41,442	4,117	^a 23,960	^a 24,081	^a 61,840	^b 3,611
65		All other fixtures not described above	(NA)	(X)	(X)	15,937	(X)	(X)	(X)	^a 19,399	(X)
66	30882 20	Plastic	8	(X)	(X)	2,339	(X)	(X)	(X)	2,003	(X)
67	19002 20	All other materials	11	(X)	(X)	^a 13,598	(X)	(X)	(X)	^b 17,396	(X)

Note: The percent of estimation of each item is indicated as follows: ^a25 to 50 percent of this item is estimated. ^bOver 50 percent of this item is estimated.

(NA) Not available. ^aRevised by 5 percent or more from previously published figures. (X) Not applicable.

¹The data for "Drinking fountains, metal" and "Drinking fountains, vitreous china" are included with "Drinking fountains, all other materials" to avoid disclosing figures for individual companies.

²The data for "Lavatories, all other materials" are included with "Lavatories, other plastics" to avoid disclosing figures for individual companies.

³The data for "Kitchen sinks, all other materials" are included with "Kitchen sinks, stainless steel" to avoid disclosing figures for individual companies.

⁴The data for "Wash sinks, plastics" and "Wash sinks, concrete" and all other materials are included in "Wash sinks, metal" to avoid disclosing figures for individual companies.

⁵The data for "Bathtubs, steel (enameled)" are included with "Bathtubs, cast-iron (enameled)" to avoid disclosing figures for individual companies.

⁶The data for "Bathtubs, all other materials" are included with "Bathtubs, other plastics (PVC, ABS)" to avoid disclosing figures for individual companies.

⁷The data for "Shower stalls, metal" are included with "Shower stalls, fiberglass (FRP) gel coat" to avoid disclosing figures for individual companies.

⁸The data for "Whirlpool baths, cast-iron (enameled)" are included with "Whirlpool baths, all other materials" to avoid disclosing figures for individual companies.

⁹The data for "Hot tubs" are included with "Spas" to avoid disclosing figures for individual companies.

AND STOCKS OF PLUMBING FIXTURES: 1992—Continued

in thousands of dollars]

Third quarter				Fourth quarter				Line no
Quantity produced	Shipments		Stocks end of quarter	Quantity produced	Shipments		Stocks end of quarter	
	Quantity	Value			Quantity	Value		
93,146	90,098	65,859	15,144	75,404	'75,975	56,447	'13,513	56
(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	57
^b '8,699	^b '8,278	^b '5,013	^b '1,711	'7,845	'7,118	'4,295	'1,721	58
^a '65,767	^a '63,780	^a '49,733	^a '9,018	'53,750	'53,954	'42,755	'7,998	59
^b '1,972	^b '1,916	^b '1,889	^b '28	1,792	1,700	1,875	'32	60
^b '10,284	^b '8,868	^b '5,346	^b '1,489	'5,921	'6,997	^b '4,224	'1,074	61
^b '6,424	^b '7,256	3,878	^b '2,898	8,096	6,206	3,498	2,688	62
(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	63
^a '24,230	^a '24,819	^a '64,049	^b '3,298	'18,110	'18,212	^a '47,647	3,341	64
(X)	(X)	19,264	(X)	(X)	(X)	'14,426	(X)	65
(X)	(X)	1,913	(X)	(X)	(X)	1,681	(X)	66
(X)	(X)	^b '17,351	(X)	(X)	(X)	'12,745	(X)	67

Table 22. PRODUCTION, SHIPMENTS,

[Quantity in units; value

Line no.	Product code	Product description	Company count	First quarter				Second quarter			
				Quantity produced	Shipments		Stocks, end of quarter	Quantity produced	Shipments		Stocks end of quarter
					Quantity	Value			Quantity	Value	
1		Plumbing fixtures	(NA)	(X)	(X)	543,854	(X)	(X)	(X)	598,428	(X)
2		Drinking fountains	(NA)	14,856	13,610	4,326	3,941	17,307	17,396	5,203	4,074
3	34310 15	Metal	6	8,937	8,868	3,088	3,139	12,430	12,367	3,816	3,182
4	32610 12	Vitreous china ¹	4	5,919	4,742	1,238	802	4,877	5,029	1,387	892
5	19001 02	All other materials	2	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
6		Lavatories	(NA)	1,447,101	1,452,392	70,075	1,062,248	1,611,861	1,530,174	73,349	1,082,147
7	34310 17	Cast-iron (enameled)	3	138,767	134,121	10,260	60,956	133,282	128,583	10,041	67,436
8	34310 18	Steel (enameled)	7	260,213	247,359	4,014	74,090	315,737	285,385	4,604	107,081
9	34310 19	Steel (stainless)	6	5,601	5,440	1,894	195	6,445	6,367	2,162	217
10	32610 17	Vitreous china	15	572,248	589,020	27,082	827,431	642,191	609,705	29,102	795,509
11	30880 04	Cultured marble	58	399,899	405,867	22,561	73,964	442,843	428,395	23,381	86,302
12	30880 31	Other plastics ²	6	70,373	70,585	4,264	25,612	71,363	71,739	4,059	25,602
13	19001 03	All other materials	2	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
14		Water closet bowls (vitreous china) .	(NA)	2,014,278	1,949,702	98,609	1,996,759	2,068,367	2,068,663	107,994	1,917,666
15	19002 02	1.6 or less g.p.f. low consumption (any material)	9	89,915	122,734	10,525	175,464	203,164	195,929	17,862	145,103
16	32610 21	Flushometer	11	175,464	171,409	10,229	114,874	141,267	137,492	9,064	112,849
17	32610 24	One piece	11	263,071	241,012	25,160	203,220	265,844	260,443	26,272	196,466
18	32610 27	Close couple (for use with flush tank)	13	1,472,297	1,401,516	49,429	1,498,340	1,444,231	1,461,448	51,410	1,458,367
19	19001 04	All other materials	5	13,531	13,031	3,266	4,861	13,861	13,351	3,386	4,881
20	32610 31	Flush tanks (vitreous china)	14	1,774,077	1,727,065	53,315	1,087,196	1,798,529	1,789,669	48,641	1,067,882
21		Urinals	(NA)	61,396	61,662	6,601	53,272	58,229	58,483	6,297	53,018
22	34310 38	Metal	8	973	932	407	225	990	1,030	443	123
23	32610 36	Vitreous china	12	60,423	60,730	6,194	53,047	57,239	57,453	5,854	52,895
24		Kitchen sinks, not including bar sinks	(NA)	982,897	987,050	58,077	263,811	1,099,289	1,079,711	62,026	289,109
25	34310 41	Cast-iron (enameled)	3	170,407	158,899	21,537	59,689	199,573	169,858	23,267	86,776
26	34310 42	Steel (enameled)	8	78,099	73,094	1,830	22,025	96,834	92,219	2,257	26,429
27	34310 47	Steel (stainless) ³	7	734,391	755,057	34,710	182,097	802,882	817,634	36,502	175,904
28	19001 07	All other materials	2	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)
29	19001 08	Bar sinks (all materials)	10	84,628	85,250	4,197	18,403	80,062	79,943	4,236	19,380
30		Wash sinks and service sinks, mop sinks, sink and laundry tray combinations, and laundry trays	(NA)	107,413	106,824	7,121	6,750	130,000	129,368	8,083	7,226
31	34310 54	Metal ⁴	7	102,513	101,566	4,770	4,682	123,696	123,339	5,495	5,026
32	30880 33	Plastics	3	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
33	32610 54	Vitreous china	4	1,785	2,218	611	2,068	2,310	2,084	595	2,200
34	32722 84	Concrete and all other materials ..	3	3,115	3,040	1,740	-	3,994	3,945	1,993	-
35		Bathtubs, including wall surrounds when sold as combined units, not including whirlpool baths	(NA)	653,288	655,370	95,188	103,783	787,670	787,095	112,703	165,681
36	34310 61	Cast-iron (enameled)	3	89,611	87,410	18,964	39,695	91,765	88,896	19,587	42,469
37	34310 62	Steel (enameled)	6	142,164	138,205	9,944	29,593	188,591	185,167	13,332	36,800
38	30880 12	Fiberglass (FRP) gel coat	29	331,770	341,251	53,678	5,433	410,122	417,106	65,798	57,173
39	30880 13	Fiberglass (FRP) acrylic	21	31,098	31,433	8,087	7,311	36,671	37,058	9,172	7,300
40	30880 14	Cultured marble	29	1,592	1,590	755	160	1,872	1,871	906	160
41	30880 01	Other plastics (PVC, ABS) ⁵	10	57,053	55,481	3,760	21,591	58,649	56,997	3,908	21,779
42	19001 09	All other materials	1	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
43		Shower receptors, sold separately ..	(NA)	84,838	83,954	4,095	9,805	102,413	101,375	4,665	9,530
44	30886 55	Plastics	17	82,238	81,493	3,582	9,144	99,915	99,125	4,184	8,869
45	19001 10	All other materials	14	2,600	2,461	513	661	2,498	2,250	481	661
46		Shower stalls, including receptor ...	(NA)	146,212	151,476	22,541	22,599	178,982	185,995	26,619	22,651
47	34310 74	Metal	1	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)
48	30880 21	Fiberglass (FRP) gel coat ⁶	19	81,785	86,632	15,225	19,094	97,464	102,641	18,124	18,977
49	30880 22	Fiberglass (FRP) acrylic ⁷	12	50,687	51,145	6,109	2,726	60,558	62,380	7,191	2,930
50	30880 23	Plastics	9	13,473	13,432	1,061	779	20,707	20,720	1,166	744
51	19001 11	All other materials	5	267	267	146	-	253	254	138	-
52		Wall surrounds, sold as separate units	(NA)	260,902	258,049	15,655	48,247	263,960	263,621	17,676	47,477
53	19002 04	Showers (all materials)	28	59,257	58,614	4,320	6,262	59,072	59,572	4,442	5,728
54	19222 06	Bathtubs (all materials)	28	201,645	199,435	11,335	41,985	204,888	204,049	13,234	41,749
55	19222 08	Bidets (all materials)	8	12,634	10,731	1,392	22,630	13,117	11,824	1,532	20,779

See footnotes at end of table.

AND STOCKS OF PLUMBING FIXTURES: 1991

in thousands of dollars]

Third quarter				Fourth quarter				Line no
Quantity produced	Shipments		Stocks end of quarter	Quantity produced	Shipments		Stocks end of quarter	
	Quantity	Value			Quantity	Value		
(X)	(X)	623,220	(X)	(X)	(X)	545,645	(X)	1
16,145	16,461	5,561	3,685	11,109	11,128	3,743	3,804	2
11,450	11,505	4,146	3,100	6,777	6,981	2,576	2,900	3
4,695	4,956	1,415	585	4,332	4,147	1,167	904	4
(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	5
1,605,378	1,611,012	74,618	1,052,753	1,487,797	1,451,088	68,774	1,076,897	6
112,703	126,083	9,874	54,227	101,986	112,358	8,809	32,797	7
303,428	341,031	5,490	85,961	248,477	259,583	4,319	73,829	8
6,816	6,625	2,161	417	5,992	5,913	2,001	503	9
684,265	645,341	29,461	798,207	699,797	654,590	30,118	844,841	10
432,041	419,914	23,568	93,419	374,459	351,638	19,536	113,559	11
66,125	72,018	4,064	20,522	57,086	67,006	3,991	11,368	12
(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	13
2,132,315	2,155,960	108,930	1,868,690	2,150,117	1,889,880	93,326	2,105,349	14
199,741	182,538	16,786	173,432	110,043	115,826	12,131	186,531	15
126,106	139,864	9,264	98,829	132,561	119,529	7,883	117,157	16
253,602	264,983	25,574	175,193	229,825	231,770	21,967	161,297	17
1,539,429	1,554,109	53,620	1,417,272	1,664,913	1,408,468	47,713	1,637,769	18
13,437	14,466	3,886	3,964	12,775	14,287	3,632	2,595	19
1,859,770	1,917,747	52,816	958,136	1,887,753	1,694,944	44,395	1,104,416	20
61,786	58,944	6,378	55,767	55,197	50,010	5,375	61,853	21
1,213	1,114	471	242	971	873	366	293	22
60,573	57,830	5,907	55,525	54,226	49,137	5,009	61,560	23
1,046,652	1,081,302	61,766	264,697	969,521	984,215	55,643	239,198	24
148,736	162,393	22,265	73,274	127,668	142,523	19,687	43,071	25
95,153	99,467	2,547	25,067	66,307	73,359	1,921	18,879	26
802,763	819,442	36,954	166,356	775,546	768,333	34,035	177,248	27
(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	28
78,101	80,314	4,355	18,121	71,717	72,369	3,796	17,209	29
112,209	114,500	7,753	5,139	99,523	99,111	6,899	5,819	30
107,644	109,199	5,207	3,489	94,559	94,517	4,650	3,843	31
(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	32
1,745	2,204	609	1,650	2,228	1,993	573	1,976	33
2,820	3,097	1,937	-	2,736	2,601	1,676	-	34
782,916	845,546	120,506	123,130	753,608	758,021	107,839	116,260	35
82,244	99,209	21,367	25,719	86,297	89,111	19,003	16,770	36
1 79,215	210,144	15,341	17,618	201,326	192,083	13,993	27,498	37
422,256	436,563	68,682	52,155	378,614	388,941	60,973	46,745	38
34,873	36,323	9,896	6,235	29,478	30,392	8,741	4,046	39
2,162	2,126	1,007	177	2,093	1,989	810	181	40
62,166	61,181	4,213	21,226	55,800	55,505	4,319	21,020	41
(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	42
106,344	104,573	4,767	10,053	90,184	89,438	4,177	10,423	43
104,301	102,539	4,328	9,392	87,897	87,251	3,768	9,796	44
2,043	2,034	439	661	2,287	2,187	409	687	45
194,155	200,281	28,859	21,736	176,852	180,061	26,351	20,237	46
(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	47
104,368	110,077	19,574	18,481	97,701	100,926	17,965	16,379	48
69,373	69,414	7,913	2,875	59,808	59,474	7,077	3,365	49
20,134	20,509	1,219	380	19,004	19,322	1,139	493	50
280	281	153	-	339	339	170	-	51
237,600	247,510	21,490	36,230	257,941	256,667	18,006	30,221	52
57,588	54,694	9,126	8,205	78,266	77,142	4,782	9,548	53
180,012	192,816	12,364	28,025	179,675	179,525	13,224	20,673	54
13,953	11,996	1,524	19,009	14,297	11,659	1,439	17,973	55

Table 22. PRODUCTION, SHIPMENTS,

[Quantity in units; value

Line no.	Product code	Product description	Company count	First quarter				Second quarter			
				Quantity produced	Shipments		Stocks, end of quarter	Quantity produced	Shipments		Stocks end of quarter
					Quantity	Value			Quantity	Value	
56		Whirlpool baths, not spas or hot tubs noninstitutional	(NA)	64,089	58,986	46,749	20,050	65,963	65,942	50,696	19,041
57	34310 86	Cast-iron (enameled) ⁸	3	11,864	8,189	5,607	2,239	10,270	8,097	4,326	2,537
58	30880 26	Fiberglass (FRP) gel coat	19	6,425	6,809	5,423	2,474	7,382	7,691	5,959	2,376
59	30880 27	Fiberglass (FRP) acrylic	24	38,214	36,730	30,211	13,307	40,621	42,571	34,625	12,111
60	30880 28	Cultured marble	28	1,457	1,449	1,473	34	1,736	1,727	1,789	34
61	30886 29	Plastics	8	6,129	5,809	4,035	1,996	5,954	5,856	3,997	1,983
62	19001 12	All other materials	3	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
63	19001 13	Hot tubs (noninstitutional, all materials)	1	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
64	19001 15	Spas (noninstitutional, all materials) ⁹	17	17,413	16,542	40,884	4,002	21,321	21,820	52,498	3,839
65		All other fixtures not described above	(NA)	(X)	(X)	15,029	(X)	(X)	(X)	16,210	(X)
66	30882 20	Plastic	7	(X)	(X)	1,442	(X)	(X)	(X)	1,693	(X)
67	19002 20	All other materials	11	(X)	(X)	13,587	(X)	(X)	(X)	14,517	(X)

- Represents zero. (NA) Not available. (X) Not applicable.

¹The data for "Drinking fountains, vitreous china" include data for "Drinking fountains, all other materials" to avoid disclosing figures for individual companies.²The data for "Lavatories, other plastics" include data for "Lavatories, all other materials" to avoid disclosing figures for individual companies.³The data for "Kitchen sinks, stainless steel" include data for "Kitchen sinks, all other materials" to avoid disclosing figures for individual companies.⁴The data for "Wash sinks, metal" include data for "Wash sinks, plastics" to avoid disclosing figures for individual companies.⁵The data for "Bathtubs, other plastics" includes data for "Bathtubs, all other materials" to avoid disclosing figures for individual companies.⁶The data for "Shower stalls, metal" are included in the data for "Shower stalls, fiberglass" to avoid disclosing figures for individual companies.⁷Due to an increased coverage of manufacturers of "Fiberglass (FRP) acrylic, shower stalls," data for 1991 are not comparable to prior years.⁸The data for "Whirlpool baths, cast-iron" include data for "Whirlpool baths, all other materials," to avoid disclosing figures for individual companies.⁹The data for "Hot tubs" are included with "Spas" to avoid disclosing figures for individual companies.

AND STOCKS OF PLUMBING FIXTURES: 1991—Continued

in thousands of dollars]

Third quarter				Fourth quarter				Line no.
Quantity produced	Shipments		Stocks end of quarter	Quantity produced	Shipments		Stocks end of quarter	
	Quantity	Value			Quantity	Value		
69,542	67,904	52,185	17,237	63,785	61,338	49,014	19,260	56
7,497	7,017	4,309	2,970	7,488	5,487	3,688	5,104	57
7,878	8,050	6,189	2,381	6,704	6,820	5,341	2,181	58
46,888	45,702	36,272	9,891	42,354	42,317	34,814	9,753	59
1,771	1,762	1,819	35	1,650	1,648	1,739	35	60
5,508	5,373	3,598	1,960	5,589	5,088	3,432	2,187	61
(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	62
(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	63
22,264	21,948	53,290	3,576	18,648	16,510	40,839	3,484	64
(X)	(X)	18,422	(X)	(X)	(X)	16,029	(X)	65
(X)	(X)	2,242	(X)	(X)	(X)	2,287	(X)	66
(X)	(X)	16,180	(X)	(X)	(X)	13,742	(X)	67

Table 23. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF PLUMBING FIXTURES: 1992 AND 1991**

[Value in thousands of dollars]

Product code ¹	Product description	Manufacturers' shipments (value, f.o.b. plant)	Exports of domestic merchandise (value at port) ^{1 2}	Value of imports for consumption ^{1 3 4}	Apparent consumption ⁵
1992					
32610 pt.	Plumbing fixtures	2,209,517	110,292	126,899	2,226,124
34310 pt.	Vitreous.....	713,107	47,715	80,286	745,678
30880 pt.	Metal.....	528,183	36,222	13,497	505,458
	Plastics.....	968,227	26,355	33,116	974,988
1991					
32610 pt.	Plumbing fixtures	2,176,458	95,861	104,049	2,184,646
34310 pt.	Vitreous.....	726,392	36,106	67,373	757,659
30880 pt.	Metal.....	545,054	28,984	10,816	526,886
	Plastics.....	905,012	30,771	25,860	900,101

pt. Part.

¹For comparison of product codes, export numbers, and import numbers for plumbing fixtures, see appendix C.²Source: Bureau of the Census report EM 545, *U.S. Exports*.³Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.⁴This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus U.S. import duties.⁵Apparent consumption is derived by subtracting exports from the total of manufacturers' shipments plus imports.**HISTORICAL NOTE**

Data on plumbing fixtures have been collected by the Bureau of the Census since 1946. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche. For further information, contact the Bureau of the Census, Data User Services Division, 301-763-4100.

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CONTACTS FOR DATA USERS

For additional information about these data, contact Annette Ralston or Cynthia Ramsey, 301-763-7871.

Chapter 4. Chemicals and Related Products

GENERAL INFORMATION

This section contains data for chemicals and related products. Included in this section is information regarding inorganic chemicals and fertilizer materials, industrial gases, paint and allied products, and pharmaceutical preparations. The inorganic chemicals and fertilizer materials group covers inorganic chemicals and fertilizer materials including chlorine, sodium hydroxide, titanium dioxide, inorganic acids, inorganic aluminum compounds, sodium and potassium compounds, ammonia, urea, phosphoric and sulfuric acid, and superphosphates and phosphatic fertilizer materials. The industrial gases group covers oxygen,

helium, carbon dioxide, argon, nitrogen, and all other industrial gases. The paint and allied products group covers special-purpose coatings, architectural coatings, and OEM coatings. Finally, the pharmaceutical preparations group covers all pharmaceutical preparations for human and veterinary use, including antacids, cold remedies, dermatological preparations, insulin preparations, laxatives, and vitamin preparations. Excluded from this section are the synthetic organic chemicals for which data are published by the U.S. International Trade Commission.

4.1 INORGANIC CHEMICALS AND FERTILIZER MATERIALS AND RELATED PRODUCTS

INTRODUCTION

The inorganic chemicals and fertilizer materials included in this report cover inorganic chemicals and fertilizer materials manufactured in the United States. They are collected in surveys MQ28A and MA28A, Inorganic Chemicals, and in surveys MQ28B and MA28B, Fertilizer Materials. In the manufacturing of these products, a chemical reaction must take place, physically altering the chemical makeup of the inorganic chemical or fertilizer material. If a chemical is mined, with no further transformation of that chemical, that chemical and the establishment mining that chemical are considered out of scope of manufacturing. Also, if a company is just mixing two different fertilizer materials together, with no chemical reaction occurring, they are considered in scope of manufacturing, but out of scope of inorganic chemicals and fertilizer materials.

The unit of measure (basis) for most of the quantities of inorganic chemicals and fertilizer materials contained in this report is 100 percent of the chemical compound. For example, if a company manufactures 100 tons of 100 percent HCl (hydrochloric acid), that company would report 100 tons of production. However, if the company manufactured 100 tons of a diluted HCl, about 75 percent HCl concentrate, that company would report 75 tons as their production. This is the amount of 100 percent HCl produced in the 75 percent solution.

The Current Industrial Reports (CIRs) on inorganic chemicals and fertilizer materials are annually compared

with the Census Bureau's annual survey of manufactures (ASM). The ASM collects information on product shipments, as well as numerous other statistics, including number of employees, wages, plant worker, hours, inventories, cost of materials, and resales. The value of product shipments is reconciled between the two reports in the time period after the CIR annual report is released, but before the ASM is released. Any revisions to the CIR surveys are then carried the following year.

The comparison of the CIR surveys on inorganic chemicals and fertilizer materials with the ASM product classes for 1991 and 1990 follows (value is in millions of dollars).

The value of shipments for the 5-digit product classes for inorganic chemicals and fertilizer materials are generally within 2 percent. The product classes that differ by more than 2 percent are most likely a result of ASM sampling differences. The CIR reports are complete coverage (universe) surveys for the product classes covered; whereas, the ASM is a sample survey that uses a weighting factor to account for companies not sampled.

SUMMARY OF FINDINGS

The value of shipments of alkalies and chlorine (SIC 2812) amounted to \$2,845.4 million in 1992, 6.1 percent below the 1991 level of \$3,028.7 million. Chlorine (SIC

28121) accounted for most of the 1992 decline, decreasing by 25.3 percent to \$194.0 million. The average unit price of the chlorine gas (SIC 28121 11) decreased to \$29.07 per short ton in 1992, a decline of 32.4 percent from the average unit price of \$43.02 per short ton in 1991. The average unit price of the liquid chlorine (SIC 28121 15) decreased 14.7 percent to \$33.00 per short ton in 1992.

Titanium dioxide (SIC 28161) production increased 14.5 percent to 1,253.4 thousand short tons in 1992. Although the value of shipments increased 18.9 percent in 1992, the quantity of shipments increased only 14.8 percent; thus creating a 3.6-percent increase in the average unit price of \$1,867.12 per short ton in 1992 over the average unit price of \$1,802.87 per short ton in 1991.

Shipments of inorganic chemicals, n.e.c. (SIC 2819), fell 4.2 percent from the 1991 total of \$12,816.7 million to \$12,283.9 million in 1992. The most important product classes in the industry are potassium and sodium compounds (SIC 28197), which increased 1.2 percent in 1992 to \$1,913.7 million; and other inorganic chemicals, n.e.c. (SIC 28199), with 1992 shipments of \$6,288.4 million, a decrease of 4.2 percent.

United States production of sulfuric acid (SIC 28193) totaled 44,860.3 thousand short tons (100 percent H_2SO_4) in 1992, approximately 3.2 percent above the figure of 43,466.1 thousand short tons for 1991. Value of shipments (including interplant transfers) amounted to \$535.2 million in 1992, compared with the value of \$586.5 million for 1991. The average unit price of sulfuric acid (SIC 28193) was \$48.65 per short ton in 1992. This is a decrease of 4.3 percent below the average unit price of \$50.84 per short ton in 1991.

Value of shipments of synthetic ammonia, nitric acid, and ammonium compounds (SIC 28731) increased 4.3 percent to \$2,663.7 million in 1992 from the 1991 level of \$2,554.0 million. Shipments of urea (SIC 28732) decreased 3.7 percent to \$695.7 million in 1992, and shipments of phosphoric acid decreased 8.7 percent to \$1,170.2.

Production of superphosphate and other phosphatic fertilizer materials (100% P_2O_5) (SIC 28742) increased 7.4 percent to 9,712.3 thousand short tons for 1992. The value of shipments amounted to \$2,522.3 million in 1992, compared with the value of \$2,832.4 million in 1991.

Table 1. SUMMARY OF PRODUCTION AND SHIPMENTS OF INORGANIC CHEMICALS AND FERTILIZER MATERIALS: 1988 TO 1992

[Quantity in short tons; value in millions of dollars]

Product code	Product description	Year	Total production (quantity)	Total shipments including interplant transfers	
				Quantity	Value
2812- —	Alkalies and chlorine	1992	(X)	(X)	¹ 2,845.4
		1991	(X)	(X)	¹ 3,028.7
		1990	(X)	(X)	¹ 3,187.0
		1989	(X)	(X)	¹ 2,989.2
		1988	(X)	(X)	¹ 2,590.4
28121 —	Chlorine (100% Cl)	1992	(X)	(X)	194.0
		1991	(X)	(X)	¹ 259.7
		1990	(X)	(X)	477.9
		1989	(X)	(X)	652.8
		1988	(X)	(X)	755.1
28123 —	Sodium hydroxide (caustic soda)	1992	(X)	(X)	2,192.3
		1991	(X)	(X)	2,387.0
		1990	(X)	(X)	2,340.8
		1989	(X)	(X)	1,989.5
		1988	(X)	(X)	1,529.0
28125 —	Other alkalies	1992	(X)	(X)	452.4
		1991	(X)	(X)	375.0
		1990	(X)	(X)	361.0
		1989	(X)	(X)	340.1
		1988	(X)	(X)	300.3
28120 00	Alkalies and chlorine n.s.k.	1992	(X)	(X)	¹ 6.7
		1991	(X)	(X)	¹ 7.1
		1990	(X)	(X)	¹ 7.3
		1989	(X)	(X)	¹ 6.9
		1988	(X)	(X)	¹ 5.9
2816- —	Inorganic color pigments	1992	(X)	(X)	2,443.2
		1991	(X)	(X)	2,064.6
		1990	(X)	(X)	2,260.9
		1989	(X)	(X)	2,195.4
		1988	(X)	(X)	1,783.0
28161 00	Titanium dioxide (composite and pure) (commodity weight)	1992	1,253.4	1,240.6	2,316.4
		1991	1,094.9	1,080.9	1,948.7
		1990	1,077.4	1,095.6	2,131.2
		1989	1,101.1	1,079.1	2,059.2
		1988	1,022.2	1,012.2	1,669.9

See footnotes at end of table.

Table 1. SUMMARY OF PRODUCTION AND SHIPMENTS OF INORGANIC CHEMICALS AND FERTILIZER MATERIALS: 1988 TO 1992—Continued

[Quantity in short tons; value in millions of dollars]

Product code	Product description	Year	Total production (quantity)	Total shipments including interplant transfers	
				Quantity	Value
2819- —	Inorganic chemicals, n.e.c.....	1992	(X)	(X)	¹ 12,283.9
		1991	(X)	(X)	¹ 12,816.7
		1990	(X)	(X)	¹ 13,612.0
		1989	(X)	(X)	¹ 12,408.1
		1988	(X)	(X)	¹ 11,806.3
28193 —	Sulfuric acid, gross (new and fortified)	1992	44,860.3	10,999.9	535.2
		1991	43,466.1	11,536.3	586.5
		1990	44,336.9	11,878.6	589.4
		1989	43,301.2	11,841.6	638.1
		1988	42,579.5	11,573.7	618.6
28194 —	Inorganic acids (except nitric, phosphoric and sulfuric)	1992	(X)	(X)	491.2
		1991	(X)	(X)	559.3
		1990	(X)	(X)	603.2
		1989	(X)	(X)	587.7
		1988	(X)	(X)	563.3
28195 00	Aluminum oxide (except natural alumina)	1992	4,916.0	4,927.4	947.5
		1991	5,094.3	5,085.4	1,080.8
		1990	5,292.5	5,274.4	1,498.5
		1989	4,697.3	4,708.4	1,214.8
		1988	4,374.3	4,408.4	838.5
28196 —	Aluminum compounds.....	1992	(X)	(X)	576.3
		1991	(X)	(X)	661.8
		1990	(X)	(X)	665.2
		1989	(X)	(X)	577.3
		1988	(X)	(X)	487.9
28197 —	Potassium and sodium compounds (except bleaches, alkalies, and alums).....	1992	(X)	(X)	1,913.7
		1991	(X)	(X)	1,891.5
		1990	(X)	(X)	1,956.3
		1989	(X)	(X)	1,940.8
		1988	(X)	(X)	1,868.2
28198 00	Chemical catalytic preparations	1992	(X)	(X)	1,311.9
		1991	(X)	(X)	1,238.0
		1990	(X)	(X)	1,221.0
		1989	(X)	(X)	1,225.2
		1988	(X)	(X)	1,093.6
28199 —	Other inorganic chemicals, n.e.c.	1992	(X)	(X)	6,288.4
		1991	(X)	(X)	6,567.0
		1990	(X)	(X)	6,846.4
		1989	(X)	(X)	6,018.4
		1988	(X)	(X)	6,140.4
28190 00	Industrial inorganic chemicals n.s.k.....	1992	(X)	(X)	¹ 219.6
		1991	(X)	(X)	¹ 231.8
		1990	(X)	(X)	¹ 232.0
		1989	(X)	(X)	¹ 205.7
		1988	(X)	(X)	¹ 195.8
28422 00	Household bleaching compounds.....	1992	435.1	426.6	851.5
		1991	422.0	418.3	826.2
		1990	359.4	356.2	724.0
		1989	333.8	331.3	723.0
		1988	265.1	263.4	713.2
28731 31	Ammonia, synthetic anhydrous ²	1992	18,295.1	10,391.8	1,095.4
		1991	17,169.2	10,002.2	1,036.0
		1990	17,003.3	10,381.6	1,072.1
		1989	16,467.0	9,599.4	1,009.7
		1988	16,821.4	9,630.4	1,010.6
28731 50	Ammonium nitrate, original solution ³	1992	7,832.5	(X)	(X)
		1991	7,819.2	(X)	(X)
		1990	7,713.7	(X)	(X)
		1989	7,871.0	(X)	(X)
		1988	7,503.8	(X)	(X)
28731 57	Ammonium sulfate ²	1992	2,391.0	2,239.3	139.6
		1991	2,243.0	2,251.3	129.9
		1990	2,519.0	2,528.7	130.1
		1989	2,383.8	2,282.2	142.1
		1988	2,332.8	2,306.6	140.5

See footnotes at end of table.

Table 1. **SUMMARY OF PRODUCTION AND SHIPMENTS OF INORGANIC CHEMICALS AND FERTILIZER MATERIALS: 1988 TO 1992—Continued**

[Quantity in short tons; value in millions of dollars]

Product code	Product description	Year	Total production (quantity)	Total shipments including interplant transfers	
				Quantity	Value
28732 —	Urea (100%)	1992	8,980.5	5,342.7	695.7
		1991	8,132.8	5,431.5	722.6
		1990	8,216.8	5,361.8	639.5
		1989	8,003.7	5,230.7	624.6
		1988	7,914.1	5,079.7	620.2
28731 11	Nitric acid (100%)	1992	8,043.4	670.3	85.1
		1991	7,926.6	623.1	81.8
		1990	7,931.0	647.4	80.6
		1989	8,348.6	743.1	84.6
		1988	7,990.9	695.8	76.2
28741 81, 85	Phosphoric acid (100% P ₂ O ₅)	1992	12,792.3	4,374.7	1,170.2
		1991	12,109.4	4,397.6	1,282.0
		1990	12,034.5	4,169.7	1,226.3
		1989	11,736.4	4,306.9	1,300.3
		1988	11,658.9	4,212.3	1,291.4
28742 —	Superphosphates and other fertilizer materials (100% P ₂ O ₅)	1992	9,712.3	9,686.6	2,522.3
		1991	9,043.9	9,017.0	2,832.4
		1990	8,981.5	9,015.8	2,711.2
		1989	8,362.0	8,247.0	2,449.3
		1988	7,967.9	7,812.7	2,552.8

n.e.c. Not elsewhere classified.

Revised by 5 percent or more from previously published figures.

(X) Not applicable.

¹Totals include values for industrial inorganic chemicals not specified by kind (n.s.k.). N.s.k. represents the value of shipments for establishments which did not provide detailed information by type of product. These establishments, typically with less than 10 employees, are not included on the mailing panel. The n.s.k. value has been estimated based on the rate of change for the reporting establishments applied to the previous year's figure.

²Excludes data for byproduct ammonia liquor and ammonium sulfate published by the Department of Energy.

³Represents total amount of original solution produced for all purposes.

Table 2A. PRODUCTION AND SHIPMENTS OF SELECTED INORGANIC CHEMICALS: 1992 AND 1991

[Quantity in short tons; value in thousands of dollars]

Product code	Product description	1992			1991		
		Total production (quantity)	Total shipments, including interplant transfers		Total production (quantity)	Total shipments, including interplant transfers	
			Quantity	Value		Quantity	Value
2812- —	Alkalies and chlorine	(X)	(X)	¹ 2,845,426	(X)	(X)	¹ 3,028,742
28121 —	Chlorine (100% Cl)	(X)	(X)	193,989	(X)	(X)	¹ 259,682
28121 11	Gas	² 11,757,216	460,214	13,377	² 11,572,224	445,643	19,173
28121 15	Liquid	9,597,513	5,472,739	180,612	9,509,598	6,214,580	¹ 240,509
28123 —	Sodium hydroxide (caustic soda)	(X)	(X)	2,192,319	(X)	(X)	2,386,971
28123 50	Sodium hydroxide, total liquid (all processes) (100% NaOH)	³ 12,248,512	(X)	(X)	³ 12,033,115	(X)	(X)
28123 61	Liquid, 68 to 74% ⁴	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
28123 65	Liquid, all other ⁴	⁵ 12,241,669	⁵ 9,763,050	⁵ 2,130,189	⁵ 12,017,129	⁵ 10,246,845	⁵ 2,322,677
28123 67	Dry (all forms) ⁶	199,664	200,815	62,130	219,467	218,594	64,294
28125 —	Other alkalies	(X)	(X)	452,397	(X)	(X)	375,020
28125 21	Potassium hydroxide (caustic potash) (88 to 92% KOH):						
28125 23	Liquid	(D)	(D)	(D)	(D)	(D)	(D)
28125 30	Solid	29,858	(D)	(D)	28,346	28,069	19,039
28125 30	Finished sodium bicarbonate	(D)	(D)	(D)	(D)	(D)	(D)
28125 40	Potassium carbonate	(D)	(D)	(D)	(D)	(D)	(D)
28125 90	Sodium carbonate (soda ash):						
14745 11	Natural and synthetic ⁷	10,419,096	(NA)	(NA)	9,932,283	(NA)	(NA)
28125 90	Alkalies, n.e.c., including soda ash, sal soda, modified sodas, etc.; excluding alkaline detergents	(X)	(X)	(D)	(X)	(X)	(D)
28120 00	Alkalies and chlorine n.s.k.	(X)	(X)	¹ 6,721	(X)	(X)	¹ 7,069
2816- —	Inorganic color pigments	(X)	(X)	2,443,165	(X)	(X)	2,064,626
28161 00	Titanium dioxide (composite and pure) (commodity weight)	1,253,368	1,240,603	2,316,352	1,094,915	1,080,866	1,948,664
28163 13	Chrome green (C.P.)	(D)	(D)	(D)	(D)	(D)	(D)
28163 15	Chrome yellow and orange (C.P.)	(D)	(D)	(D)	(D)	(D)	(D)
28163 17	Molybdate chrome orange (C.P.)	(D)	(D)	(D)	(D)	(D)	(D)
28163 18	Zinc yellow (zinc chromate) (C.P.)	(D)	(D)	(D)	(D)	(D)	(D)
28163 19	Other chrome colors (C.P.)	(D)	26,433	64,788	(D)	(D)	(D)
2819- —	Inorganic chemicals, n.e.c. ⁸	(X)	(X)	¹ 12,283,923	(X)	(X)	¹ 12,816,734
28193 —	Sulfuric acid, gross (new and fortified)	44,860,287	10,999,995	535,248	43,466,151	11,536,224	586,579
28194 —	Inorganic acids (except nitric, phosphoric and sulfuric)	(X)	(X)	491,224	(X)	(X)	559,292
28194 11	Boric (boracic)	(D)	(D)	(D)	(D)	(D)	(D)
28194 41	Hydrochloric acid, including anhydrous (100% HCl) ⁹	3,565,760	1,611,541	93,480	3,380,939	1,661,193	¹ 111,007
28194 45	From salt and acid	(¹¹)	(¹¹)	(¹¹)	(¹¹)	(¹¹)	(¹¹)
28194 47	From chlorine and hydrogen	460,432	359,754	20,603	415,329	312,391	17,514
28194 47	Byproduct and other	¹⁰ 3,105,328	¹⁰ 1,251,787	¹⁰ 72,877	¹⁰ 2,965,610	¹⁰ 1,348,802	¹⁰ 93,493
28194 51	Hydrocyanic, including anhydrous (100% HCN)	469,188	90,126	54,052	298,740	79,980	50,146
28194 51	Hydrofluoric (100% HF):						
28194 61	Produced and withdrawn from system:						
28194 65	Anhydrous	¹¹ 181,398	(D)	(D)	¹¹ 161,980	(D)	(D)
28194 67	Technical	(¹²)	(D)	(D)	(¹²)	(D)	(D)
28194 98	Mixed (sulfuric and nitric) (commodity weight)	(D)	(D)	(D)	(D)	(D)	(D)
28194 98	Other inorganic acids, n.e.c., including chlorosulfonic and perchloric	(X)	(X)	97,475	(X)	(X)	¹ 149,942
28195 00	Aluminum oxide (except natural alumina)	4,916,016	4,927,383	947,499	5,094,253	5,085,357	1,080,771
28196 —	Aluminum compounds	(X)	(X)	576,311	(X)	(X)	661,769
28196 13	Chloride:						
28196 17	Liquid and crystal (100% AlCl ₃)	22,687	(D)	(D)	¹ 18,504	(D)	(D)
28196 25	Anhydrous (100% AlCl ₃)	19,808	19,859	15,292	¹ 17,692	¹ 18,141	¹ 17,074
28196 27	Hydroxide, trihydrate (100% Al ₂ O ₃ ·3H ₂ O)	846,585	848,843	174,512	860,725	855,203	215,160
28196 51	Fluoride (technical)	(D)	(D)	(D)	(D)	(D)	(D)
28196 51	Sulfate:						
28196 55	Commercial (17% Al ₂ O ₃), including municipalities	1,047,160	1,015,611	108,739	1,192,602	1,148,623	126,862
28196 73	Iron-free (17% Al ₂ O ₃)	213,853	213,457	20,161	¹ 154,635	¹ 155,635	¹ 17,764
28196 79	Aluminates (sodium aluminate, potassium aluminate, etc. (100% by weight))	125,337	118,807	32,353	121,165	111,443	39,592
28196 79	Other inorganic aluminum compounds (light aluminum hydroxide, and cryolite, etc.)	(X)	(X)	163,617	(X)	(X)	162,691
28197 —	Potassium and sodium compounds (except bleaches, alkalies, and alums)	(X)	(X)	1,913,743	(X)	(X)	1,891,469
28197 13	Potassium compounds, n.e.c.:						
28197 16	Iodide (100% KI)	965	886	10,619	1,022	898	12,219
28197 16	Sulfate (100% K ₂ SO ₄)	542,100	596,274	91,185	526,856	482,934	73,221

See footnotes at end of table.

Table 2A. PRODUCTION AND SHIPMENTS OF SELECTED INORGANIC CHEMICALS: 1992 AND 1991—Continued

[Quantity in short tons; value in thousands of dollars]

Product code	Product description	1992			1991		
		Total production (quantity)	Total shipments, including interplant transfers		Total production (quantity)	Total shipments, including interplant transfers	
			Quantity	Value		Quantity	Value
	Inorganic Chemicals, n.e.c.—Cont.						
	Potassium and sodium compounds—Cont.						
	Potassium compounds, n.e.c.—Cont.						
28197 18	Pyrophosphate (tetrapotassium pyrophosphate) (100% $K_4P_2O_7$)	(D)	(D)	(D)	'25,951	'18,672	'17,508
28197 23	Potassium phosphates (100% by weight)	11,971	10,550	13,031	'11,829	'11,554	'13,171
28197 24	Potassium silicates (100% by weight)	5,522	5,427	3,511	(D)	(D)	(D)
28197 17	Other potassium salts and compounds, n.e.c., including potassium chlorate, nitrate, and perchlorate	(X)	(X)	117,760	(X)	(X)	116,363
28197 21	Sodium (metal) (100% Na)	(D)	(D)	(D)	(D)	(D)	(D)
	Sodium compounds, n.e.c.:						
28197 28	Sodium bromides (100% by weight)	(D)	(D)	(D)	(D)	(D)	(D)
28197 27	Chlorate (100% $NaClO_3$)	554,564	551,936	181,838	448,908	426,369	145,061
28197 29	Hydrosulfide (sodium sulfhydrate) (100% NaSH)	108,950	122,183	37,033	'93,054	'89,231	'33,234
28197 30	Hydrosulfite (100% $Na_2S_2O_4$)	(D)	(D)	(D)	(D)	(D)	(D)
	Phosphate:						
28197 32	Monobasic (100% $NaH_2S_2PO_4$) ¹²	(D)	(D)	(D)	16,287	17,509	16,022
28197 33	Dibasic (100% Na_2HPO_4) ¹³	20,701	21,804	22,503	19,947	20,515	19,829
28197 34	Tribasic (100% Na_3PO_4)	(D)	(D)	(D)	24,907	28,482	16,654
28197 35	Tetrabasic (pyro) (100% $Na_4P_2O_7$)	(D)	17,279	15,514	29,096	29,905	19,829
28197 36	Meta (100% $NaPO_3$)	31,266	29,888	28,692	38,501	35,845	30,760
28197 37	Acid pyro	33,668	32,955	31,946	36,205	38,346	35,420
28197 38	Tripoly (100% $Na_5P_3O_{10}$)	(D)	(D)	(D)	462,303	452,059	241,404
28197 39	Other sodium phosphates	(X)	(X)	(D)	(X)	(X)	30,066
	Silicates:						
28197 41	Soluble silicate glass (water glass, solid and liquid) (anhydrous) ¹³	912,043	547,360	150,987	891,749	548,429	135,651
28197 42	Metasilicate pentahydrate (100% Na_2SiO_3)	46,995	47,196	11,976	48,206	48,594	14,528
28197 44	Metasilicate anhydrous (100% Na_2SiO_3)	58,902	50,445	17,579	57,431	50,441	20,879
28197 51	Silicofluoride (100% Na_2SiF_6)	(D)	(D)	(D)	(D)	(D)	(D)
	Sulfate:						
28197 61	High purity (100% Na_2SO_4)	380,780	358,935	33,085	407,825	404,605	36,953
28197 66	Lower purity (100% Na_2SO_4) and Glauber's salt (100% $Na_2SO_4 \cdot 10H_2O$)	380,238	372,699	17,032	396,911	385,428	19,713
28197 84	Sulfite (100% Na_2SO_3)	(D)	(D)	(D)	(D)	(D)	(D)
28197 85	Thiosulfate (hypo) (100% $Na_2S_2O_3 \cdot 5H_2O$)	(D)	(D)	(D)	(D)	(D)	(D)
28197 87	Other sodium compounds, n.e.c., including sodium bisulfate, bifluoride, borate, flouride and other silicates and excluding bleaches	(X)	(X)	609,951	(X)	(X)	606,692
28198 00	Chemical catalytic preparations	(X)	(X)	1,311,911	(X)	(X)	1,238,045
28199 —	Other inorganic chemicals n.e.c.	(X)	(X)	6,288,373	(X)	(X)	6,566,961
28199 01	Reagent and high purity grades of inorganic chemicals refined from purchased technical grades	(X)	(X)	(D)	(X)	(X)	26,579
28199 02	Antimony compounds, excluding pigment grades	(X)	(X)	47,643	(X)	(X)	'42,234
	Barium compounds:						
28199 04	Carbonate (precipitated) (100% $BaCO_3$)	(D)	(D)	(D)	(D)	(D)	(D)
28199 05	Sulfate (100% $BaSO_4$)	(D)	(D)	(D)	(D)	(D)	(D)
28199 06	Other barium compounds, including barium chloride, nitrate, peroxide, and sulfide; excluding pigment grades	(X)	(X)	17,490	(X)	(X)	16,702
28199 09	Bismuth compounds, excluding bismuth carbonate ¹⁴	(X)	(X)	11,708	(X)	(X)	9,696
28199 10	Bromine (isolated) (100% Br)	228,800	60,660	38,952	224,458	59,232	37,799
28199 11	Cadmium compounds	(X)	(X)	8,398	(X)	(X)	7,939
	Calcium compounds:						
28199 12	Carbide (commercial)	(D)	(D)	(D)	(D)	(D)	(D)
28199 13	Carbonate (precipitated) (100% $CaCO_3$)	(D)	(D)	(D)	(D)	(D)	(D)
28199 14	Chloride (100% $CaCl_2$)	387,800	436,050	61,898	465,925	475,909	66,083
	Phosphates:						
28199 18	Monobasic (100% $CaH_4(PO_4)_2$)(21%P)	727,956	742,900	187,143	690,659	680,125	191,363
28199 19	Dibasic (100% $CaHPO_4$) (18.5010P)	771,189	765,554	212,037	724,860	707,123	206,753
	Tribasic (100% $Ca_3(PO_4)_2$)(18%P):						
28742 71	Animal feed grades	427,965	455,279	92,613	445,911	448,339	96,830
28199 22	Other grades	37,300	38,725	23,479	42,026	39,354	22,004
28199 23	Other inorganic calcium compounds	(X)	(X)	46,158	(X)	(X)	46,849
	Carbon activated:						
28199 25	Granular carbons (dry weight)	75,959	71,236	142,890	72,002	62,044	125,287
28199 27	Pulverized carbons (dry weight)	55,907	52,613	53,359	56,815	55,101	56,576
	Chromium compounds:						
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(D)	(D)	(D)	(D)	(D)
28199 34	Other chromium compounds, including potassium bichromate and excluding chrome colors	(X)	(X)	104,393	(X)	(X)	93,881
	Copper compounds:						
28199 35	Cuprous oxide (100% Cu_2O)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 2A. PRODUCTION AND SHIPMENTS OF SELECTED INORGANIC CHEMICALS: 1992 AND 1991—Continued

[Quantity in short tons; value in thousands of dollars]

Product code	Product description	1992			1991		
		Total production (quantity)	Total shipments, including interplant transfers		Total production (quantity)	Total shipments, including interplant transfers	
			Quantity	Value		Quantity	Value
	Inorganic Chemicals, n.e.c.—Cont.						
	Other inorganic chemicals n.e.c.—Cont.						
	Copper compounds:—Cont.						
28199 37	Other copper compounds, including copper cyanide and copper sulfate.	(X)	(X)	80,168	(X)	(X)	77,936
28199 38	Gold compounds.	(X)	(X)	(D)	(X)	(X)	(D)
28199 39	Hydrogen peroxide (100% by weight) ¹⁵	280,037	259,209	242,130	254,098	243,128	253,707
28199 40	Iodine, crude or resublimed (100% I)	923	(D)	(D)	947	(D)	(D)
	Iron compounds:						
28199 42	Ferric chloride (100% FeCl ₃)	(D)	(D)	(D)	164,961	164,636	124,561
28199 43	Iron oxides and hydroxides (100% by weight), excluding iron oxide pigments	7,365	(D)	(D)	7,220	(D)	(D)
28199 44	Other iron compounds, including ferrous sulfate	(X)	(X)	49,772	(X)	(X)	47,436
28199 45	Lithium compounds.	(X)	(X)	(D)	(X)	(X)	(D)
	Magnesium compounds:						
28199 48	Chloride (100% MgCl ₂)	311,474	88,878	14,506	301,830	75,162	14,504
28199 49	Sulfate (100% MgSO ₄)	(D)	(D)	(D)	(D)	(D)	(D)
28199 50	Other magnesium compounds, including magnesium and epsom salts	(X)	(X)	84,334	(X)	(X)	82,213
	Manganese compounds:						
28199 51	Dioxide (100% MnO ₂)	61,088	63,096	89,495	56,813	61,216	89,446
28199 52	Other manganese compounds, including potassium, and other permanganates, battery grade, and manganese sulfate	(X)	(X)	60,998	(X)	(X)	60,096
	Mercury and compounds:						
28199 53	Mercury, redistilled	(D)	(D)	(D)	(D)	(D)	(D)
28199 54	Other mercury compounds, including mercuric oxide; excluding mercuric fulminate and medicinal grades ..	(X)	(X)	(D)	(X)	(X)	(D)
	Molybdenum compounds:						
28199 5A	Oxides (100% by weight)	(D)	12,900	74,087	(D)	(D)	(D)
28199 5B	Molybdates (ammonium molybdate, sodium molybdates, etc. (100% by weight)	5,041	4,168	34,824	4,521	3,570	29,973
28199 5C	Other molybdenum compounds.	(X)	(X)	16,892	(X)	(X)	21,794
	Nickel compounds:						
28199 56	Oxides and hydroxides (100% by weight)	(D)	(D)	(D)	(D)	(D)	(D)
28199 57	Chloride (100% NiCl ₂)	(D)	(D)	(D)	454	457	659
28199 55	Sulfate (100% NiSO ₄)	(D)	(D)	(D)	(D)	(D)	(D)
28199 59	Other nickel compounds	(X)	(X)	19,432	(X)	(X)	17,392
	Phosphorus and compounds:						
28199 58	Phosphorus, elemental (technical).	270,821	273,694	360,948	305,548	305,619	407,379
28199 60	Oxychloride (100% POCl ₃)	28,721	7,738	6,002	27,191	(D)	(D)
28199 61	Pentasulfide (100% P ₂ S ₅)	65,638	49,359	52,552	63,554	47,123	47,648
28199 63	Trichloride (chloride) (100% PCl ₃)	82,958	40,524	27,690	123,748	69,209	50,066
28199 64	Other phosphorus compounds, including phosphorus pentoxide.	(X)	(X)	(D)	(X)	(X)	51,425
28199 65	Rare earth compounds	(X)	(X)	79,039	(X)	(X)	78,436
	Silicon compounds:						
28199 66	Silicon tetrachloride (siltet) (100% SiCl ₄)	(D)	(D)	(D)	64,116	(D)	(D)
28199 67	Silica gel	(X)	(X)	50,348	(X)	(X)	(D)
28199 68	Other silicon compounds.	(X)	(X)	(D)	(X)	(X)	(D)
28199 73	Silver compounds	(X)	(X)	142,630	(X)	(X)	171,759
	Strontium compounds:						
28199 71	Carbonate (100% SO ₂)	(D)	(D)	(D)	(D)	(D)	(D)
28199 72	Other strontium compounds	(X)	(X)	3,321	(X)	(X)	(D)
	Sulfur and sulfur compounds:						
28199 74	Sulfur, recovered elemental (metric tons) ⁷	7,048,000	7,094,000	315,438	6,645,000	6,682,000	428,816
28199 75	Sulfur dioxide (produced for sale) (100% SO ₂)	239,466	250,312	41,748	219,481	211,729	35,356
28199 78	Other sulfur compounds, including sulfur chloride.	(X)	(X)	90,035	(X)	(X)	75,741
28199 83	Tin compounds	(X)	(X)	(D)	(X)	(X)	(D)
	Tungsten compounds:						
28199 84	Tungstates (ammonium tungstate, sodium tungstate, etc. (100% by weight)	(D)	(D)	(D)	(D)	(D)	(D)
28199 85	All other tungstate compounds	(X)	(X)	(D)	(X)	(X)	(D)
	Zinc compounds:						
28199 87	Sulfate (100% ZnSO ₄ ·H ₂ O)	36,692	38,141	20,637	33,425	34,138	18,163
28199 86	Oxide and peroxide (100% by weight)	37,824	38,119	40,317	31,589	34,097	36,527
28199 88	Chloride (100% ZnCl ₂)	(D)	(D)	(D)	(D)	(D)	(D)
28199 89	Other zinc compounds, excluding pigment grades	(X)	(X)	16,465	(X)	(X)	13,137
28199 90	Platinum, radium, tantalum, and thallium.	(X)	(X)	(D)	(X)	(X)	(D)
28199 98	All other inorganic chemicals, including nuclear fuels, titanium tetrachloride, and other titanium compounds.	(X)	(X)	1,999,503	(X)	(X)	2,057,425
28190 00	Industrial inorganic chemicals n.s.k.	(X)	(X)	1219,614	(X)	(X)	1231,848

See footnotes at end of table.

Table 2A. PRODUCTION AND SHIPMENTS OF SELECTED INORGANIC CHEMICALS: 1992 AND 1991—Continued

[Quantity in short tons; value in thousands of dollars]

Product code	Product description	1992			1991		
		Total production (quantity)	Total shipments, including interplant transfers		Total production (quantity)	Total shipments, including interplant transfers	
			Quantity	Value		Quantity	Value
	Chlorine and other inorganic bleaching compounds	712,100	711,056	1,079,043	670,322	679,283	1,054,226
28422 00	Household	435,063	426,624	851,504	421,966	418,331	826,231
28422 43	Liquid (sodium hypochlorite, etc.) (less than 7 percent available chlorine or equivalent oxidizing value) (100% Cl equivalent)	387,358	375,050	700,632	376,013	368,232	670,847
28422 53	Dry (calcium hypochlorite, etc.) (less than 50 percent available chlorine or equivalent oxidizing value) (100% Cl equivalent)	47,705	51,574	150,872	45,953	50,099	155,384
28199 00	Industrial	277,037	284,432	227,539	248,356	260,952	227,995
28199 30	Liquid (sodium hypochlorite, etc.) (7 percent or more available chlorine or equivalent oxidizing value) (100% Cl equivalent)	(D)	(D)	(D)	(D)	(D)	(D)
28199 15	Dry (calcium hypochlorite, etc.) (50 percent or more available chlorine or equivalent oxidizing value) (100% Cl equivalent)	(D)	(D)	(D)	(D)	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies. n.e.c. Not elsewhere classified. n.s.k. Not specified by kind. Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹Totals include values for industrial inorganic chemicals not specified by kind (n.s.k.). N.s.k. represents the value of shipments for establishments which did not provide detailed information by type of product. These establishments, typically with less than 10 employees, are not included on the mailing panel. The n.s.k. value has been estimated based on the rate of change for the reporting establishments applied to the previous years' figure.

²Includes quantities liquefied for use, storage, or shipments.

³Includes quantities later evaporated to dry caustic soda and reported as such.

⁴Includes some liquid shipped as interplant transfers to other establishments for further processing to dry forms.

⁵Product code 28123 61, "Sodium hydroxide liquid, 68 to 74%," is combined with product code 28123 65, "Sodium hydroxide liquid, all other," to avoid disclosing figures for individual companies.

⁶Includes unspecified amounts produced from liquid caustic received from other establishments.

⁷Source: U.S. Bureau of Mines.

⁸Includes value of inorganic chemicals shipped by establishments classified in both "manufacturing" and "nonmanufacturing" industries.

⁹Includes anhydrous hydrochloric acid production of 861,604 short tons in 1992 and 776,138 short tons in 1991; quantity of shipments of 179,366 in 1992 and 161,779 in 1991; and value of shipments of 28,513 in 1992 and 25,953 in 1991.

¹⁰Product code 28194 41, "Hydrochloric acid produced from salt and acid" is combined with product code 28194 47, "Hydrochloric acid byproduct and other" to avoid disclosing figures for individual companies.

¹¹Product code 28194 65, "Hydrofluoric acid technical produced and withdrawn from the system" is combined with product code 28194 71, "Hydrofluoric acid anhydrous produced and withdrawn from the system" to avoid disclosing figures for individual companies.

¹²Represents quantities produced only for sale or interplant transfer.

¹³Quantity produced excludes quantities consumed in the manufacture of meta-, ortho-, and sesquicarbonates. Shipments figures include unspecified amounts shipped to other plants for use in manufacturing meta-, ortho-, and sesquicarbonates.

¹⁴Product code 28199 09, "Other bismuth compounds," excluding bismuth carbonate, which is classified as a medicinal chemical and is out of scope of this survey.

¹⁵Production includes unspecified amounts of hydrogen peroxide produced but not withdrawn from the system.

Table 2B. PRODUCTION AND SHIPMENTS OF FERTILIZER MATERIALS: 1992 AND 1991

[Quantity in thousands of short tons; value in millions of dollars]

Product code	Chemical and basis	1992			1991		
		Total production (quantity)	Total shipments, including interplant transfers		Total production (quantity)	Total shipments, including interplant transfers	
			Quantity	Value		Quantity	Value
28193 —	Sulfuric acid, gross (new and fortified)	44,860.3	10,999.9	535.2	43,466.1	11,536.3	586.5
28193 11	Oleum under 40 percent	1,270.5	834.5	52.4	1,401.9	895.2	61.1
28193 15	Oleum 40 percent	(D)	(D)	(D)	(D)	(D)	(D)
28193 17	Oleum over 40 percent	(D)	(D)	(D)	(D)	(D)	(D)
28193 31	Other than oleum ¹	43,204.3	9,821.1	461.6	41,820.1	10,415.7	510.6
28193 51	Sulfuric acid produced through decomposition of alkylated acid and other spent acids, including sulfuric acid sludge	(D)	(X)	(X)	(D)	(X)	(X)
28731 —	Synthetic ammonia, nitric acid, and ammonium compounds	(X)	(X)	2,663.7	(X)	(X)	2,554.0
28731 11	Nitric acid (100% HNO ₃)	² 8,043.4	670.3	85.1	² 7,926.6	623.1	81.8
28731 31	Ammonia, synthetic anhydrous (100% NH ₃) ³	18,295.1	10,391.8	1,095.4	17,169.2	10,002.2	1,036.0
28731 30	Fertilizer use	16,485.5	9,284.5	974.9	15,501.3	9,074.7	930.8
28731 32	Other uses	1,809.6	1,107.3	120.5	¹ 1,667.9	¹ 927.5	¹ 105.2
28731 50	Ammonium nitrate: Original solution (100% NH ₄ NO ₃) ⁴	7,832.5	(X)	(X)	7,819.2	(X)	(X)
	Fertilizer use (100% NH ₄ NO ₃): Solution	3,691.7	264.7	23.7	3,675.7	322.6	31.3
28731 52	Solution produced for sale	222.8	(D)	(D)	262.0	(D)	(D)
28731 54	Solution produced for consumption	3,468.9	(D)	(D)	3,413.7	(D)	(D)
28731 51	Solid	2,132.0	2,278.9	263.1	2,190.6	2,193.5	246.9
28731 53	Explosives and other uses (solution and solid)	2,001.9	1,984.4	253.0	1,905.6	1,844.8	239.3
28731 55	Nitrogen solutions (100% N), including mixtures containing urea	3,342.0	3,185.9	645.4	3,291.8	3,116.3	635.9
28731 65	Solutions containing ammonia ⁵	117.8	116.0	23.2	119.6	119.0	25.8
28731 66	Ammonium nitrate/urea solutions	3,224.2	3,069.9	622.2	3,172.2	2,997.3	610.1
28731 73	Ammonium nitrate/calcium nitrate solutions	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
28731 67	All other two-component products	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
28731 57	Ammonium sulfate, synthetic and byproduct other than coke oven byproduct (100% (NH ₄) ₂ SO ₄) ³	2,391.0	2,239.3	139.6	2,243.0	2,251.3	129.9
28731 56	Synthetic	(D)	(D)	(D)	(D)	(D)	(D)
28731 58	Byproduct, other than coke oven	(D)	(D)	(D)	(D)	(D)	(D)
28731 69	Other ammonium compounds, including ammonium chloride, gray and white	(X)	(X)	160.9	(X)	(X)	152.9
28732 —	Urea (100%)	8,980.5	5,342.7	695.7	8,132.8	5,431.5	722.6
28732 16	For fertilizer use: Solutions produced as intermediate in nitrogen solutions	3,170.6	(D)	(D)	2,730.6	36.3	5.1
28732 18	Solid	4,772.6	4,298.5	557.1	4,481.6	4,497.9	594.8
	Other uses: Feed (solid and solution)	248.7	(D)	(D)	229.0	229.1	32.3
28732 22	All other (solid and solution)	788.6	757.3	99.2	691.6	668.2	90.4
28741 —	Phosphoric acid (100% P ₂ O ₅)	12,792.3	4,374.7	1,170.2	12,109.4	4,397.6	¹ 1,282.0
28741 81	Thermal	340.3	143.6	102.2	444.7	179.2	110.5
28741 85	Wet	12,452.0	4,231.1	1,068.0	11,664.7	4,218.4	¹ 1,171.5
	By use: Fertilizer	11,594.2	3,710.3	879.2	10,943.5	3,734.9	1,002.1
28741 87	Feed and other	857.8	520.8	188.8	¹ 721.2	483.5	169.4
	By grade: Ortho (less than 65% P ₂ O ₅)	11,366.7	3,356.8	830.5	10,388.8	3,080.1	¹ 828.9
28741 89	Super (65% or more P ₂ O ₅)	1,085.3	874.3	237.5	1,275.9	1,138.3	342.6
28742	Superphosphates and other phosphatic fertilizer materials (100% P ₂ O ₅)	9,712.3	9,686.6	2,522.3	9,043.9	9,017.0	2,832.4
28742 15	Normal and enriched superphosphates (100% P ₂ O ₅)	43.5	9.6	2.2	49.1	14.7	3.3
28742 41	Concentrated superphosphates (100% P ₂ O ₅)	981.6	953.1	208.1	906.6	909.7	222.7
28742 51	Monoammonium phosphates (100% P ₂ O ₅)	1,330.6	1,339.2	332.3	1,176.3	1,149.6	357.5
28742 52	Diammonium phosphates (100% P ₂ O ₅)	7,069.6	7,103.8	1,909.8	6,672.7	6,715.6	2,172.0
28742 55, 61	Other ammonium phosphates and other phosphatic fertilizer materials (100% P ₂ O ₅)	287.0	280.9	69.9	¹ 239.2	¹ 227.4	¹ 76.9

(D) Data withheld to avoid disclosing figures for individual companies.
(X) Not applicable.¹Revised by 5 percent or more from previously published figures.¹Figures for "Other than oleum" include chamber process acid.²Includes unspecified amounts of nitric acid produced but not withdrawn from the system.³Excludes data for byproduct ammonia liquor and ammonium sulfate published by the Department of Energy.⁴Represents total amount of original solution produced, including amounts used for fertilizer, explosives, and other uses, and amounts consumed in manufacturing other products such as "Nitrogen solutions" (product code 28731 55).⁵"Ammonium nitrate/calcium nitrate solutions" (product code 28731 73) and "All other two-component products" (product code 28731 67) are combined with "Solutions containing ammonia" (product code 28731 65) to avoid disclosing figures for individual companies.

Table 3. **QUANTITIES OF SELECTED INORGANIC ACIDS AND FERTILIZER MATERIALS PRODUCED AND CONSUMED IN SAME PLANT: 1992 AND 1991**

[Thousands of short tons]

Product code	Product description	Basis	Consumed in producing plants	
			1992	1991
28194 41	Hydrochloric acid, including anhydrous	100% HCl	2,047.9	1,931.4
28194 45	From salt and acid .....	.....do.....	(¹)	(¹)
28194 47	From chlorine and hydrogen .....	.....do.....	99.9	'95.2
28194 51	Byproduct and other .....	.....do.....	1,947.9	1,836.1
28194 51	Hydrocyanic acid, including anhydrous	100% HCN	373.0	214.1
28194 61	Hydrofluoric acid:			
28194 65	Anhydrous	100% HF	(D)	(D)
28194 67	Technical	100% HF	(D)	(D)
28193 —	Mixed acids (sulfuric and nitric)	(X)	(D)	(D)
28731 11	Sulfuric acid, gross (new and fortified)	100% H ₂ SO ₄	33,070.0	32,457.8
28731 30, 32	Nitric acid	100% HNO ₃	7,538.1	7,338.5
28731 51	Ammonia (synthetic) anhydrous ²	100% HN ₃	7,678.6	6,970.2
28731 52, 54	Ammonium nitrate:			
28731 53	Fertilizer use solid .....	.....do.....	(D)	(D)
28731 57	Fertilizer use solution ³	100% NH ₄ NO ₃	3,425.8	3,187.3
28732 16, 18	Explosives and other uses (solution and solid) .....	.....do.....	(D)	64.3
28741 81	Ammonium sulfate ²	100% (NH ₄) ₂ SO ₄	(D)	(D)
28741 85	Urea:			
28742 —	Fertilizer use, solution and solid	100% urea	3,214.8	2,754.5
	Phosphoric acid	100% P ₂ O ₅	8,551.6	7,916.8
	Thermal .....	.....do.....	195.2	313.5
	Wet .....	.....do.....	8,356.4	7,603.3
	Superphosphates and other fertilizer materials .....	.....do.....	36.8	'39.6

(D) Data withheld to avoid disclosing figures for individual companies. ¹Revised by 5 percent or more from previously published figures.¹Product code 28194 41, "Hydrochloric acid from salt and acid" is combined with product code 28194 47, "Hydrochloric acid byproduct and other" to avoid disclosing figures for individual companies.²Excludes data for byproduct ammonia liquor and ammonium sulfate published by the Department of Energy.³Excludes amount converted to solid nitrate.Table 4. **SUMMARY OF SELECTED FERTILIZER MATERIALS/INTERPLANT TRANSFERS: 1992 AND 1991**

[Quantity in thousands of short tons; value in millions of dollars]

Product code	Product description	Basis	1992		1991	
			Quantity	Value	Quantity	Value
28193 —	Sulfuric acid, gross (new and fortified)	100% H ₂ SO ₄	1,652.8	47.3	1,883.6	58.7
28193 11	Oleum, 40 percent or more .....	.....do.....	(D)	(D)	(D)	(D)
28193 31	Oleum under 40 percent .....	.....do.....	(D)	(D)	(D)	(D)
28193 31	Other than oleum ¹ .....	.....do.....	1,616.1	45.5	1,853.5	56.6
28731 31	Ammonia, synthetic anhydrous ²	100% NH ₃	1,299.5	123.0	1,817.7	155.4
28731 30	Fertilizer use .....	.....do.....	706.5	60.2	1,278.0	107.6
28731 32	Other uses .....	.....do.....	593.0	62.8	539.7	47.8
28731 57	Ammonium sulfate ²	100% (NH ₄) ₂ SO ₄	(D)	(D)	(D)	(D)
28731 11	Nitric acid	100% HNO ₃	(D)	(D)	(D)	(D)
28732 —	Urea	100% urea	(D)	(D)	(D)	(D)
28741 81, 85	Phosphoric acid	100% P ₂ O ₅	(D)	(D)	(D)	(D)
28742 —	Superphosphates and other phosphatic fertilizer materials .....	.....do.....	(D)	(D)	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

¹Figures for "Other than oleum" include chamber process acid.²Excludes data for byproduct ammonia liquor and ammonium sulfate published by the Department of Energy.Table 5. **SODIUM SULFATE, PRODUCTION, AND NUMBER OF ESTABLISHMENTS, BY PROCESS: 1992 AND 1991**[Net tons of 100% Na₂SO₄]

Process	Number of establishments ¹		Production	
	1992	1991	1992	1991
Total	17	18	761,018	804,736
Natural	3	3	450,667	461,473
Viscose rayon	3	3	(D)	(D)
Sodium dichromate	1	1	(D)	(D)
Phenol, boric acid, formic acid, and other	10	11	140,505	'161,306

Note: Net tons includes Glauber's salt converted to 100 percent Na₂SO₄.(D) Data withheld to avoid disclosing figures for individual companies. ¹Revised by 5 percent or more from previously published figures.¹The processes by which sodium sulfate is manufactured are per SRI, Directory of Chemical Producers, 1993.

Table 6. PRODUCTION OF SPECIFIED INORGANIC CHEMICALS, BY STATES: 1992 AND 1991

[Short tons]

Geographic area	Hydrochloric acid (100% HCl) (2819441, 445, and 447)		Aluminum sulfate commercial (17% Al ₂ O ₃) (2819651)		Chlorine gas (281211)		Sodium hydroxide (all processes) (2812350)	
	1992	1991	1992	1991	1992	1991	1992	1991
United States	3,565,760	3,380,939	1,047,160	1,192,602	11,757,216	11,572,224	12,248,512	12,033,115
Alabama	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Arkansas	(D)	(D)	(D)	(D)	-	-	-	-
California	(D)	¹ 44,181	33,342	64,320	(D)	(D)	-	(D)
Colorado	-	-	(D)	(D)	-	-	-	-
Delaware	(D)	(D)	-	-	(D)	(D)	(D)	(D)
Florida	-	-	(D)	(D)	-	-	-	-
Georgia	28,719	(D)	116,946	¹ 153,820	256,108	240,077	275,368	259,752
Illinois	113,723	123,564	(D)	(D)	-	-	-	-
Indiana	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Kansas	(D)	(D)	-	-	(D)	(D)	(D)	(D)
Kentucky	609,110	551,780	-	-	(D)	(D)	(D)	(D)
Louisiana	1,054,315	1,009,955	84,560	91,743	4,565,483	4,587,143	4,722,871	4,683,652
Maine	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Maryland	(D)	(D)	(D)	(D)	-	-	(D)	(D)
Massachusetts	(D)	(D)	(D)	(D)	-	-	-	-
Michigan	119,946	¹ 114,801	(D)	(D)	(D)	(D)	(D)	(D)
Minnesota	-	-	(D)	(D)	-	-	-	-
Mississippi	-	-	30,139	27,592	(D)	(D)	-	-
Missouri	-	-	-	-	-	-	(D)	(D)
Montana	-	-	(D)	(D)	-	-	-	-
Nevada	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
New Jersey	24,652	36,514	(D)	(D)	-	-	(D)	(D)
New Mexico	(D)	(D)	-	-	-	-	-	-
New York	(D)	(D)	-	-	(D)	573,374	(D)	(D)
North Carolina	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Ohio	(D)	(D)	59,933	67,793	(D)	(D)	-	-
Oklahoma	-	-	-	-	(D)	(D)	(D)	(D)
Oregon	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Pennsylvania	(D)	(D)	(D)	(D)	-	-	-	-
South Carolina	-	-	(D)	(D)	-	-	-	-
Tennessee	(D)	(D)	57,518	60,304	(D)	(D)	(D)	(D)
Texas	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Utah	(D)	(D)	(D)	(D)	(D)	(D)	-	-
Virginia	-	-	(D)	(D)	-	-	-	-
Washington	26,967	22,948	(D)	(D)	458,500	462,323	512,267	512,925
West Virginia	(D)	(D)	-	-	(D)	(D)	(D)	(D)
Wisconsin	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

- Represents zero.
published figures.

(D) Data withheld to avoid disclosing figures for individual companies.

¹Revised by 5 percent or more from previously

Table 7. TOTAL SHIPMENTS (INCLUDING INTERPLANT TRANSFERS) OF SULFURIC ACID, BY STATES: 1992 AND 1991

[Quantity in thousands of short tons of 100% H₂SO₄; value in millions of dollars]

State	1992		1991	
	Quantity	Value	Quantity	Value
United States	10,999.9	535.2	11,536.3	586.5
Arizona	(D)	(D)	(D)	(D)
California	590.0	40.4	828.3	58.5
Florida	435.6	13.4	293.2	11.4
Georgia	(D)	(D)	356.2	21.5
Illinois	(D)	(D)	(D)	(D)
Louisiana	1,686.9	97.3	1,821.3	109.0
New Jersey	(D)	(D)	(D)	(D)
Ohio	366.1	23.5	329.0	24.0
Texas	1,788.1	122.3	1,714.1	109.8
Virginia	(D)	(D)	(D)	(D)
Washington	(D)	(D)	(D)	(D)
Other states	4,115.4	167.5	3,887.9	186.7

(D) Data withheld to avoid disclosing figures for individual companies.

Table 8. PRODUCTION OF NEW SULFURIC ACID, BY STATES: 1992 AND 1991

[Thousands of short tons of 100% H₂SO₄]

State	1992 ¹	1991 ¹
United States	41,684.1	40,305.3
Arizona	1,841.1	1,768.0
California	618.8	694.7
Florida	19,946.0	19,271.0
Georgia	535.1	527.6
Illinois	(D)	(D)
Louisiana	5,555.4	5,848.1
Missouri	(D)	(D)
New Jersey	(D)	(D)
New Mexico	(D)	(D)
Ohio	349.0	306.2
Oklahoma and Texas	1,897.9	1,782.1
Virginia	(D)	(D)
Washington	(D)	(D)
Other states	8,678.0	7,687.6

(D) Data withheld to avoid disclosing figures for individual companies.

¹Includes data for Government-owned, privately operated plants.

Table 9A. PRIMARY PRODUCTION AND STOCKS OF SPECIFIED INORGANIC CHEMICALS, BY QUARTER: 1992 AND 1991

[Short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter	Stocks on hand December 31
28196 17	Aluminum chloride (anhydrous) (100% AlCl_3).....	1992 1991	19,808 17,692	5,259 4,648	4,939 4,157	4,959 4,608	4,651 4,279	(NA) (NA)
28195 00	Aluminum oxide (alumina) (100% Al_2O_3).....	1992 1991	4,916,016 5,094,253	1,203,916 1,243,902	1,241,278 1,236,421	1,177,532 1,235,302	1,293,290 1,378,628	92,039 137,944
28196 51	Aluminum sulfate (commercial) ¹ (17% Al_2O_3).....	1992 1991	1,047,160 1,192,602	267,540 281,650	264,037 300,874	276,786 321,227	238,797 288,851	(NA) (NA)
28194 11	Boric (boracic), (100% H_3BO_3).....	1992 1991	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)
28199 12	Calcium carbide (commercial).....	1992 1991	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(NA) (NA)
28199 18	Calcium phosphate: Monobasic (21% minimum P).....	1992 1991	727,956 690,659	187,049 182,560	166,113 148,721	190,181 166,999	184,613 192,379	30,044 29,847
28199 19	Dibasic (except fertilizer grades) (100% CaHPO_4).....	1992 1991	771,189 724,860	187,313 178,376	194,357 176,872	188,496 176,333	201,023 193,279	36,482 30,314
28742 71	Tribasic (100% $\text{Ca}_3(\text{PO}_4)_2$): Animal feed grades (defluorinated phosphate rock).....	1992 1991	427,965 445,911	102,189 105,265	109,134 111,835	112,567 113,811	104,075 115,000	13,347 31,727
28199 22	Other grades.....	1992 1991	37,300 42,026	9,237 11,874	10,618 10,339	7,904 10,845	9,541 8,968	1,497 3,495
	Carbon activated, excluding reactivated carbon (dry weight).....	1992 1991	131,866 128,817	30,991 35,000	32,852 31,329	33,763 32,842	34,260 9,646	17,306 16,317
28199 25	Granular carbons.....	1992 1991	75,959 72,002	(D) (D)	(D) (D)	19,080 (D)	20,733 (D)	8,139 7,277
28199 27	Pulverized carbons.....	1992 1991	55,907 56,815	(D) (D)	(D) (D)	14,683 (D)	13,527 (D)	9,167 9,040
28121 11	Chlorine (100% Cl): Total gas ²	1992 1991	11,757,216 11,572,224	2,859,498 2,891,980	2,885,310 2,782,964	2,985,408 2,976,378	3,027,000 2,920,902	(NA) (NA)
28121 15	Total liquid.....	1992 1991	9,597,513 9,509,598	2,343,075 2,332,788	2,350,999 2,280,801	2,376,153 2,471,632	2,527,286 2,424,377	(NA) (NA)
28163 15	Chrome colors (C.P.): Chrome yellow and orange.....	1992 1991	(D) (D)	(D) (D)	3,436 (D)	(D) (D)	2,298 (D)	(NA) (NA)
28163 17	Molybdate chrome orange.....	1992 1991	(D) (D)	(D) (D)	(D) (D)	(D) (D)	(D) 631	(NA) (NA)
	Hydrochloric acid (100% HCl): Total.....	1992 1991	3,565,760 3,380,939	895,195 844,817	907,280 774,791	859,174 883,022	904,111 878,309	(NA) (NA)
28194 41	From salt and acid.....	1992 1991	(³) (³)	(³) (³)	(³) (³)	(³) (³)	(³) (³)	(NA) (NA)
28194 45	From chlorine and hydrogen.....	1992 1991	460,432 415,329	111,221 99,322	111,840 98,660	116,557 103,709	120,814 113,638	(NA) (NA)
28194 47	Byproduct and other.....	1992 1991	³ 3,105,328 ³ 2,965,610	³ 783,974 ³ 745,495	³ 795,440 ³ 676,131	³ 742,617 ³ 779,313	³ 783,297 ³ 764,671	(NA) (NA)

See footnotes at end of table.

Table 9A. **PRIMARY PRODUCTION AND STOCKS OF SPECIFIED INORGANIC CHEMICALS, BY QUARTER: 1992 AND 1991—Continued**

[Short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter	Stocks on hand December 31
	Hydrofluoric acid (100% HF): Produced and withdrawn from system:							
28194 61	Anhydrous	1992	181,398	46,292	43,041	45,749	46,316	(NA)
28194 65	Technical	1991	161,980	56,796	45,542	41,843	17,799	(NA)
28199 39	Hydrogen peroxide (100% by weight) ..	1992	280,037	62,817	63,146	73,171	80,903	(NA)
		1991	254,098	61,940	66,649	66,245	59,264	(NA)
28199 58	Phosphorus elemental (technical)	1992	270,821	73,673	67,770	58,870	70,508	4,536
		1991	305,548	87,832	78,024	70,980	68,712	7,161
28199 60	Phosphorus oxychloride (100% POCl ₃) ..	1992	28,721	7,200	7,328	7,224	6,969	(NA)
		1991	27,191	6,317	6,051	8,285	6,538	(NA)
28199 61	Phosphorus pentasulfide (100% P ₂ S ₅)	1992	65,638	17,489	16,392	9,997	21,760	(NA)
		1991	63,554	18,229	15,698	15,680	13,947	(NA)
28199 63	Phosphorus trichloride (chloride) (100% PCl ₃)	1992	82,958	20,736	20,876	20,532	20,814	(NA)
		1991	123,748	31,581	33,774	36,919	21,474	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92% KOH) (liquid) ⁴	1992	(D)	(D)	(D)	(D)	(D)	(NA)
		1991	(D)	(D)	(D)	(D)	(D)	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (100% K ₄ P ₂ O ₇) ..	1992	(D)	(D)	(D)	(D)	(D)	(NA)
		1991	25,951	5,775	7,085	5,852	7,239	(NA)
28199 69	Silicon tetrachloride (silitet) (100% SiCl ₄)	1992	(D)	(D)	(D)	(D)	(D)	(NA)
		1991	64,116	(D)	(D)	(D)	(D)	(NA)
28197 21	Sodium (metal) (100% Na)	1992	(D)	(D)	(D)	(D)	(D)	(D)
		1991	(D)	(D)	(D)	(D)	(D)	(D)
28125 30	Sodium bicarbonate, finished (58% Na ₂ O)	1992	(D)	(D)	(D)	(D)	(D)	(NA)
		1991	(D)	(D)	(D)	(D)	(D)	(NA)
28125 30 14745 11	Sodium carbonate, natural and synthetic (58% Na ₂ O)	1992	10,419,096	2,539,259	2,588,688	2,622,381	2,668,768	308,752
		1991	9,932,283	2,442,041	2,433,748	2,473,067	2,583,427	258,037
28199 33	Sodium bichromate and chromate (hydrous)	1992	(D)	(D)	(D)	(D)	(D)	(NA)
		1991	(D)	(D)	(D)	(D)	(D)	(NA)
28197 27	Sodium chlorate (100% NaClO ₃)	1992	554,564	135,079	127,141	143,568	148,776	30,584
		1991	448,908	99,117	105,865	123,533	120,393	36,476
28197 30	Sodium hydrosulfite (100% Na ₂ SO ₄) ..	1992	(D)	(D)	(D)	(D)	(D)	(NA)
		1991	(D)	(D)	(D)	(D)	(D)	(NA)
28123 50	Sodium hydroxide (caustic soda) (100% NaOH) (all processes): Liquid ⁵	1992	12,248,512	2,995,278	3,010,844	3,108,131	3,134,259	(D)
		1991	12,033,115	3,002,907	2,917,037	3,098,577	3,014,594	(D)
28123 67	Dry (all forms)	1992	199,664	47,422	48,703	53,243	50,296	(NA)
		1991	219,467	58,430	53,693	56,131	51,213	(NA)

See footnotes at end of table.

Table 9A. PRIMARY PRODUCTION AND STOCKS OF SPECIFIED INORGANIC CHEMICALS, BY QUARTER: 1992 AND 1991—Continued

[Short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter	Stocks on hand December 31
28197 34	Sodium phosphate: Tribasic (100% Na_3PO_4)	1992 (D)	(D)	(D)	(D)	(D)	5,175	(NA)
		1991 24,907	5,648	6,853	5,384	7,022	(NA)	
28197 35	Tetrabasic (pyro) (100% $\text{Na}_4\text{P}_2\text{O}_7$) ..	1992 (D)	(D)	(D)	4,955	(D)	(NA)	
		1991 29,096	9,894	6,138	(D)	(D)	(NA)	
28197 36	Meta (100% NaPO_3)	1992 31,266	8,289	7,425	7,206	8,346	(NA)	
		1991 38,501	11,290	9,642	8,448	9,121	(NA)	
28197 38	Tripoly (100% $\text{Na}_5\text{P}_3\text{O}_{10}$)	1992 (D)	(D)	(D)	(D)	(D)	(NA)	
		1991 462,303	137,221	122,981	(D)	(D)	(NA)	
28197 41	Sodium silicate: Soluble silicate glass (water glass, solid and liquid) anhydrous ⁶	1992 912,043	225,860	227,750	226,969	231,464	(NA)	
		1991 891,749	218,124	213,035	244,913	215,677	(NA)	
28197 42	Metasilicate pentahydrate (100% $\text{Na}_2\text{SiO}_3 \cdot 5\text{H}_2\text{O}$)	1992 46,995	11,566	11,142	12,452	11,835	(NA)	
		1991 48,206	12,594	12,562	10,588	12,462	(NA)	
28197 44	Metasilicate anhydrous (100% Na_2SiO_3)	1992 58,902	14,061	13,845	14,720	16,276	(NA)	
		1991 57,431	17,436	17,124	(D)	(D)	(NA)	
	Sodium sulfate (100% Na_2SO_4): Total	1992 761,018	190,648	208,840	175,824	185,706	(NA)	
		1991 804,736	254,071	180,544	190,025	180,096	(NA)	
28197 61	High purity (more than 99% Na_2SO_4)	1992 380,780	95,423	108,312	90,106	86,939	(NA)	
		1991 407,825	99,067	101,171	103,620	103,967	(NA)	
28197 66	Lower purity (99% or less Na_2SO_4) and Glauber's salt (100% $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$)	1992 380,238	95,225	100,528	85,718	98,767	(NA)	
		1991 396,911	155,004	79,373	86,405	76,129	(NA)	
28161 00	Titanium dioxide (composite and pure) (100% TiO_2) (commodity weight)	1992 1,253,368	290,911	314,075	327,387	320,995	⁷ 119,240	
		1991 1,094,915	272,343	269,818	273,804	278,950	⁷ 79,485	

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available.

¹Excludes quantities produced and consumed by municipalities.²Total gas production including quantities liquefied for use, storage, or shipments.³"Hydrochloric acid produced from salt and acid" is combined with "Hydrochloric acid byproduct and other" to avoid disclosing figures for individual companies.⁴Liquid production figures represent total production including quantities later evaporated to solid caustic and reported as such.⁵Includes some liquid shipped as interplant transfers to other establishments for further processing to dry forms.⁶Excludes quantities produced and consumed in the same establishment in the manufacture of meta-, ortho-, and sesquisilicates.⁷Represents total stocks of producing companies, including amounts held at locations other than producing locations.

Table 9B. PRIMARY PRODUCTION OF INORGANIC FERTILIZER CHEMICALS,
BY QUARTER: 1992 AND 1991

[Thousands of short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter
28731 31	Ammonia, synthetic anhydrous (100% NH ₃):						
	Production	1992	18,295.1	4,686.5	4,688.5	4,334.1	4,586.0
		1991	17,169.2	4,272.8	4,442.4	4,253.5	4,200.5
	Stocks on hand, end of quarter	1992	(NA)	1,614.7	908.7	963.7	1,419.9
		1991	(NA)	1,341.6	683.6	879.1	1,255.1
28731 30	Fertilizer use:						
	Production	1992	16,485.5	4,254.7	4,285.5	3,882.4	4,062.9
		1991	15,501.3	3,822.2	4,032.0	3,868.5	3,778.6
	Stocks on hand, end of quarter	1992	(NA)	1,475.1	810.7	841.1	1,264.6
		1991	(NA)	1,276.2	612.1	806.1	1,162.1
28731 32	Other uses:						
	Production	1992	1,809.6	431.8	403.0	451.7	523.1
		1991	1,667.9	450.6	410.4	385.0	421.9
	Stocks on hand, end of quarter	1992	(NA)	139.6	98.0	122.6	155.3
		1991	(NA)	65.4	71.5	73.0	93.0
28731 50	Ammonium nitrate (100% NH ₄ NO ₃):						
	Original solution ¹ :						
	Production	1992	7,832.5	1,978.4	1,993.2	1,906.7	1,954.2
		1991	7,819.2	2,034.6	2,035.3	1,855.9	1,893.4
	Stocks on hand, end of quarter	1992	(NA)	217.4	123.1	220.0	230.5
		1991	(NA)	255.6	171.3	272.7	253.8
28731 52	Fertilizer use:						
	Solution produced for sale as such for direct application:						
	Production	1992	222.8	59.2	63.7	59.1	40.8
		1991	262.0	61.9	73.2	65.9	61.0
	Stocks on hand, end of quarter	1992	(NA)	(S)	(S)	(S)	(S)
		1991	(NA)	1.9	2.1	0.9	2.0
28731 54	Solution produced for consumption in the manufacture of nitrogen solutions or other fertilizer materials:						
	Production	1992	3,468.9	868.3	909.9	813.6	877.1
		1991	3,413.7	824.4	877.4	835.2	876.7
	Stocks on hand, end of quarter	1992	(NA)	64.4	41.7	59.7	71.9
		1991	(NA)	87.8	51.5	50.8	70.6
28731 51	Solid:						
	Production	1992	2,132.0	589.2	568.3	450.3	524.2
		1991	2,190.6	640.9	578.1	433.3	538.3
	Stocks on hand, end of quarter	1992	(NA)	62.3	30.1	75.5	114.2
		1991	(NA)	132.0	74.0	123.0	161.4
28731 53	Explosives and other uses (solutions and solids) ² :						
	Production	1992	2,001.9	463.7	458.3	565.8	514.1
		1991	1,905.6	502.8	510.7	489.7	402.4
	Stocks on hand, end of quarter	1992	(NA)	(S)	(S)	(S)	(S)
		1991	(NA)	(S)	(S)	(S)	(S)
28731 56	Ammonium sulfate (100% (NH ₄) ₂ SO ₄):						
28731 58	Production	1992	2,391.0	576.1	618.9	599.7	596.3
		1991	2,243.0	561.4	595.7	540.0	545.9
	Stocks on hand, end of quarter	1992	(NA)	122.4	102.6	187.5	212.3
		1991	(NA)	145.8	140.8	187.8	186.6
28731 11	Nitric acid (100% HNO ₃):						
	Production	1992	8,043.4	2,020.5	2,039.9	1,969.2	2,013.8
		1991	7,926.6	2,083.6	2,040.1	1,904.8	1,898.1
	Stocks on hand, end of quarter	1992	(NA)	(X)	(X)	(X)	(X)
		1991	(NA)	(X)	(X)	(X)	(X)
28731 55	Nitrogen solutions, including mixtures containing urea (100% N):						
	Production	1992	3,342.0	835.6	895.3	781.2	829.9
		1991	3,291.8	847.3	863.5	774.4	806.6
	Stocks on hand, end of quarter	1992	(NA)	360.4	206.1	396.4	345.4
		1991	(NA)	428.2	204.7	347.7	328.5

See footnotes at end of table.

Table 9B. **PRIMARY PRODUCTION OF INORGANIC FERTILIZER CHEMICALS, BY QUARTER: 1992 AND 1991—Continued**

[Thousands of short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter
28731 65	Nitrogen solutions, including mixtures containing urea (100% N):—Cont. Solutions containing ammonia ³ :						
	Production	1992	117.8	21.7	37.8	33.4	24.9
		1991	119.6	30.6	34.2	30.4	24.4
	Stocks on hand, end of quarter	1992	(NA)	11.5	21.2	18.4	19.8
		1991	(NA)	24.2	20.5	23.9	18.8
28731 66	Solutions containing ammonium nitrate/urea:						
	Production	1992	3,224.2	813.9	857.5	747.8	805.0
		1991	3,172.2	816.7	829.3	744.0	782.2
	Stocks on hand, end of quarter	1992	(NA)	348.9	184.9	378.0	325.6
		1991	(NA)	404.1	184.2	323.8	309.7
28731 73	Solutions containing ammonium nitrate/calcium nitrate:						
	Production	1992	(³)	(³)	(³)	(³)	(³)
		1991	(³)	(³)	(³)	(³)	(³)
	Stocks on hand, end of quarter	1992	(NA)	(X)	(X)	(X)	(X)
		1991	(NA)	(X)	(X)	(X)	(X)
28731 67	All other two-component products:						
	Production	1992	(³)	(³)	(³)	(³)	(³)
		1991	(³)	(³)	(³)	(³)	(³)
	Stocks on hand, end of quarter	1992	(NA)	(³)	(³)	(³)	(³)
		1991	(NA)	(³)	(³)	(³)	(³)
28741 —	Phosphoric acid (100% P ₂ O ₅):						
	Production	1992	12,792.3	3,198.7	3,167.9	3,182.5	3,243.2
		1991	12,109.4	2,974.4	2,987.8	3,061.0	3,086.2
	Stocks on hand, end of quarter	1992	(NA)	246.6	246.1	264.4	303.5
		1991	(NA)	245.1	284.5	235.6	245.4
28741 81	Thermal:						
	Production	1992	340.3	92.8	85.1	72.0	90.4
		1991	444.7	132.6	115.9	97.2	99.0
	Stocks on hand, end of quarter	1992	(NA)	14.1	10.3	13.9	13.1
		1991	(NA)	19.0	15.0	17.9	19.2
28741 85	Wet:						
	Production	1992	12,452.0	3,105.9	3,082.8	3,110.5	3,152.8
		1991	11,664.7	2,841.8	2,871.9	2,963.8	2,987.2
	Stocks on hand, end of quarter	1992	(NA)	232.5	235.8	250.5	290.4
		1991	(NA)	226.1	269.5	217.7	226.2
28741 86	By use:						
	Fertilizer:						
	Production	1992	11,594.2	2,876.3	2,893.6	2,902.4	2,921.9
		1991	10,943.5	2,683.1	2,718.8	2,778.0	2,763.6
	Stocks on hand, end of quarter	1992	(NA)	(D)	(D)	(D)	(D)
		1991	(NA)	(D)	(D)	(D)	(D)
28741 87	Feed and other:						
	Production	1992	857.8	229.6	189.2	208.1	230.9
		1991	721.2	158.7	153.1	185.8	223.6
	Stocks on hand, end of quarter	1992	(NA)	(D)	(D)	(D)	(D)
		1991	(NA)	(D)	(D)	(D)	(D)
28741 88	By grade:						
	Ortho (less than 65% P ₂ O ₅):						
	Production	1992	11,366.7	2,701.4	2,862.2	2,878.7	2,924.4
		1991	10,388.8	2,530.6	2,573.0	2,625.0	2,660.2
	Stocks on hand, end of quarter	1992	(NA)	158.7	185.9	204.7	241.0
		1991	(NA)	164.7	197.5	151.2	156.0
28741 89	Super (more than 65% P ₂ O ₅):						
	Production	1992	1,085.3	404.5	220.6	231.8	228.4
		1991	1,275.9	311.2	298.9	338.8	327.0
	Stocks on hand, end of quarter	1992	(NA)	73.8	49.9	45.8	49.4
		1991	(NA)	61.4	72.0	66.5	70.2
28732 —	Urea (100% urea):						
	Production	1992	8,980.5	2,381.9	2,308.0	2,046.7	2,243.9
		1991	8,132.8	2,101.5	2,110.7	1,945.0	1,975.6
	Stocks on hand, end of quarter	1992	(NA)	413.4	277.3	357.8	485.7
		1991	(NA)	423.5	337.8	363.9	411.2

See footnotes at end of table.

Table 9B. **PRIMARY PRODUCTION OF INORGANIC FERTILIZER CHEMICALS, BY QUARTER: 1992 AND 1991—Continued**

[Thousands of short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter
28732 16	Urea (100% urea):—Cont. For fertilizer use:						
	Solutions produced as intermediate in nitrogen solutions:						
	Production	1992	3,170.6	831.0	825.0	735.7	778.9
		1991	2,730.6	690.7	705.0	660.8	674.1
	Stocks on hand, end of quarter	1992	(NA)	(D)	(D)	(D)	(D)
28732 18	Solid:	1991	(NA)	(D)	(D)	(D)	(D)
	Production	1992	4,772.6	1,278.8	1,231.7	1,065.9	1,196.2
		1991	4,481.6	1,175.8	1,153.0	1,050.9	1,101.9
	Stocks on hand, end of quarter	1992	(NA)	310.9	223.9	275.0	393.3
		1991	(NA)	316.6	269.4	253.0	326.6
28732 21	Other uses:						
	Feed (solid and solution):						
	Production	1992	248.7	91.1	48.8	51.3	57.5
		1991	229.0	52.8	51.6	62.2	62.4
	Stocks on hand, end of quarter	1992	(NA)	9.6	4.0	8.0	8.8
28732 22	All other (solid and solution):	1991	(NA)	5.5	5.3	8.3	4.9
	Production	1992	788.6	181.0	202.5	193.8	211.3
		1991	691.6	182.2	201.1	171.1	137.2
	Stocks on hand, end of quarter	1992	(NA)	(D)	(D)	(D)	(D)
		1991	(NA)	(D)	(D)	(D)	(D)

Note: Detail may not add to total due to independent rounding.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. (X) Not applicable. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

¹Represents total amount of original solution produced, including amounts used for fertilizer, explosives, and other uses and amounts consumed in manufacturing other products, such as "Nitrogen solutions" (product code 28731 55).²Excludes data for Government-owned, privately operated plants.³"Solutions containing ammonium nitrate/calcium nitrate" (product code 28731 73) and "All other two-component products" (product code 28731 67) are combined with "Solutions containing ammonia" (product code 28731 65) to avoid disclosing figures for individual companies.

Table 9C. **PRODUCTION, SHIPMENTS, AND STOCKS OF SUPERPHOSPHATES AND OTHER PHOSPHATIC FERTILIZER MATERIALS, BY QUARTER: 1992 AND 1991**

[Thousands of short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter
28742 —	Superphosphates and other phosphatic fertilizer materials:						
	Production (100% P ₂ O ₅)	1992	9,712.3	2,433.0	2,468.2	2,348.6	2,462.5
		1991	9,043.9	2,228.6	2,234.4	2,281.0	2,299.9
	Shipments, including interplant transfers (100% P ₂ O ₅)	1992	9,686.6	2,428.2	2,462.4	2,408.4	2,387.6
		1991	9,017.0	2,262.4	2,300.6	2,240.9	2,213.1
	Stocks on hand, end of quarter (gross weight) ...	1992	(NA)	695.1	634.7	664.8	849.2
		1991	(NA)	692.4	619.5	686.3	700.8
28742 15	Normal and enriched superphosphates:						
	Production (100% P ₂ O ₅)	1992	43.5	13.0	13.5	7.1	9.9
		1991	49.1	16.6	13.8	7.9	10.8
	Shipments, including interplant transfers (100% P ₂ O ₅)	1992	9.6	2.5	3.0	1.4	2.7
		1991	14.7	5.0	4.7	1.4	3.6
	Stocks on hand, end of quarter (gross weight) ...	1992	(NA)	23.2	22.0	31.0	25.6
		1991	(NA)	25.4	23.3	33.6	25.7
28742 41	Concentrated superphosphates (triple) (over 40% P ₂ O ₅):						
	Production (100% P ₂ O ₅)	1992	981.6	239.2	243.1	240.3	259.0
		1991	906.6	241.9	206.8	210.5	247.4
	Shipments, including interplant transfers (100% P ₂ O ₅)	1992	953.1	229.9	238.5	250.0	234.7
		1991	909.7	238.4	196.9	219.8	254.6
	Stocks on hand, end of quarter (gross weight) ...	1992	(NA)	98.8	95.7	73.8	124.6
		1991	(NA)	88.7	105.8	84.6	69.4
	Ammonium phosphates:						
28742 51	Monoammonium phosphates:						
	Production (100% P ₂ O ₅)	1992	1,330.6	373.7	301.0	314.7	341.2
		1991	1,176.3	316.2	253.0	304.2	302.9
	Shipments, including interplant transfers (100% P ₂ O ₅)	1992	1,339.2	394.9	315.2	313.7	315.4
		1991	1,149.6	301.7	272.5	289.4	286.0
	Stocks on hand, end of quarter (gross weight) .	1992	(NA)	93.3	74.5	135.9	172.5
		1991	(NA)	114.1	79.2	90.3	128.8
28742 52	Diammonium phosphates:						
	Production (100% P ₂ O ₅)	1992	7,069.6	1,724.6	1,826.1	1,731.7	1,787.2
		1991	6,672.7	1,585.2	1,695.8	1,713.0	1,678.7
	Shipments, including interplant transfers (100% P ₂ O ₅)	1992	7,103.8	1,730.0	1,822.2	1,785.9	1,765.7
		1991	6,715.6	1,668.3	1,723.8	1,696.8	1,626.7
	Stocks on hand, end of quarter (gross weight) .	1992	(NA)	421.4	401.5	354.8	439.6
		1991	(NA)	379.3	369.7	432.6	420.5
28742 55, 61	Other ammonium phosphates and other phosphatic fertilizer materials ¹ :						
	Production (100% P ₂ O ₅)	1992	287.0	82.5	84.5	54.8	65.2
		1991	239.2	68.7	65.0	45.4	60.1
	Shipments, including interplant transfers (100% P ₂ O ₅)	1992	280.9	70.9	83.5	57.4	69.1
		1991	227.4	49.0	102.7	33.5	42.2
	Stocks on hand, end of quarter (gross weight) ...	1992	(NA)	58.4	41.0	69.3	86.9
		1991	(NA)	84.9	41.5	45.2	56.4

Note: Detail may not add to total due to independent rounding.

(NA) Not available.

¹"Other ammonium phosphates" (product code 28742 55) is combined with "Other phosphatic fertilizer materials" (product code 28742 61) to avoid disclosure of figures for individual companies.

Table 10. PRODUCTION AND STOCKS OF SULFURIC ACID, BY PROCESS, BY QUARTER: 1992 AND 1991

[Thousands of short tons of 100% H₂SO₄]

Quarter and year	Production					Spent acid used in fortification ²	Stocks (gross) at producing plants at end of period
	Sulfuric acid, gross, new and fortified			New acid ¹	Sulfuric acid produced through decomposition		
	Total	Oleum grades	Other than oleum grades				
1992							
Total	44,860.3	1,656.0	43,204.3	41,684.1	(D)	(D)	(NA)
First quarter	11,250.5	430.4	10,820.1	10,476.5	(D)	(D)	810.2
Second quarter	10,976.3	382.6	10,593.7	10,120.5	(D)	(D)	725.1
Third quarter	11,130.9	455.4	10,675.5	10,334.3	(D)	(D)	701.7
Fourth quarter	11,502.6	387.6	11,115.0	10,752.8	(D)	(D)	814.5
1991							
Total	43,466.2	1,646.1	41,820.1	40,305.3	(D)	(D)	(NA)
First quarter	10,812.9	405.3	10,407.6	10,089.8	(D)	(D)	794.6
Second quarter	10,641.4	425.5	10,215.9	9,873.1	(D)	(D)	689.9
Third quarter	11,061.0	404.5	10,656.5	10,212.9	(D)	(D)	732.1
Fourth quarter	10,950.9	410.8	10,540.1	10,129.5	(D)	(D)	789.1

Note: Detail may not add to total due to independent rounding.

(D) Data withheld to avoid disclosing figures for individual companies.

(NA) Not available.

¹Represents gross production of sulfuric acid less acid produced through decomposition and spent acid used in fortification.²Spent acid fortified by the addition of sulfur trioxide.

Table 11. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS AND FERTILIZER MATERIALS: 1992 AND 1991

[Quantity in thousands of metric tons; value in thousands of dollars]

Product code	Product description	Production (quantity)	Exports of domestic merchandise ¹		Percent exports to production (quantity)	Imports for consumption ²		Apparent consumption ⁴ (quantity)	Percent imports to apparent consumption (quantity)
			Quantity	Value		Quantity	Value ³		
	1992								
28121 11	Chlorine gas	10,659.3	30.8	10,737	0.3	249.9	21,304	10,878.4	2.3
28123 50	Sodium hydroxide, total liquid (all processes)	11,104.7	1,149.9	300,043	10.4	987.0	144,594	10,941.8	9.0
28125 21	Potassium hydroxide, liquid	(D)	95.0	39,817	(D)	19.2	5,563	(D)	(D)
28125 30	Finished sodium bicarbonate	(D)	41.2	16,956	(D)	7.5	4,659	(D)	(D)
28161 00	Titanium dioxide (composite and pure)	1,136.3	266.3	420,371	23.4	116.2	205,754	986.2	11.8
28193 —	Sulfuric acid, gross	40,671.2	143.4	11,822	0.4	1,985.4	68,495	42,513.2	4.7
28194 11	Boric acid	(D)	79.6	53,650	(D)	6.4	4,854	(D)	(D)
28194 41, 45, 47	Hydrochloric acid	3,232.8	42.9	6,643	1.3	222.4	5,490	3,412.3	6.5
28194 61, 65	Hydrofluoric acid	164.5	7.7	10,363	4.7	70.4	69,622	227.2	31.0
28194 51, 67	Other inorganic acids	(D)	17.9	21,018	(D)	17.5	16,430	(D)	(D)
28194 98, 28195 00	Aluminum oxide	4,457.0	1,111.9	279,561	24.9	4,666.9	906,251	8,012.0	58.2
28196 13, 17	Aluminum chloride	38.5	6.3	5,232	16.3	9.9	6,532	42.1	23.4
28196 25	Aluminum hydroxide trihydrate	767.5	48.1	26,951	6.3	94.6	49,797	814.0	11.6
28196 27	Aluminum fluoride	(D)	15.1	12,481	(D)	32.3	29,268	(D)	(D)
28196 51	Aluminum sulfate (commercial)	949.4	5.1	1,043	0.5	24.5	4,795	968.8	2.5
28196 73	Aluminates (sodium aluminate, etc.)	113.6	17.0	5,985	15.0	0.9	882	97.5	0.9
28197 13	Potassium iodide	0.9	0.1	1,172	10.3	0.1	906	0.9	10.5
28197 16	Potassium sulfate	491.5	-	-	-	68.8	11,783	560.3	12.3
28197 23	Potassium phosphates	10.9	2.7	3,156	24.8	2.1	2,784	10.3	20.4
28197 24	Potassium silicates	5.0	0.9	707	19.0	0.5	212	4.6	11.0
28197 21	Sodium metal	(D)	9.8	23,469	(D)	0.3	881	(D)	(D)
28197 27	Sodium chlorate	502.8	9.6	5,264	1.9	303.8	107,993	797.0	38.1
28197 84	Sodium sulfite	(D)	31.0	11,002	(D)	11.8	5,647	(D)	(D)
28197 32, 33	Sodium phosphate mono and dibasic	(D)	4.3	5,312	(D)	6.9	7,879	(D)	(D)
28197 34	Sodium phosphate tribasic	(D)	0.7	830	(D)	2.4	1,851	(D)	(D)
28197 38	Sodium phosphate tripoly	(D)	52.3	40,241	(D)	52.3	32,425	(D)	(D)
28197 41, 42, 45, 47	Sodium silicates (other than metasilicates)	826.9	23.4	9,039	2.8	7.4	6,367	810.9	0.9
28197 44	Sodium metasilicates	96.0	9.8	4,382	10.2	1.4	1,376	87.6	1.6
28197 61, 66	Sodium sulfate	690.0	176.6	14,822	25.6	160.7	12,999	674.1	23.8
28197 85	Sodium thiosulfate (hypo)	(D)	2.1	771	(D)	1.7	763	(D)	(D)
28199 05	Barium sulfate	(D)	1.5	1,056	(D)	11.6	10,080	(D)	(D)
28199 04	Barium carbonate	(D)	0.4	2,928	(D)	12.9	6,694	(D)	(D)
28199 10	Bromine	207.4	5.3	5,541	2.6	0.9	566	203.0	0.4
28199 12	Calcium carbide	(D)	24.4	13,003	(D)	3.3	1,641	(D)	(D)
28199 13	Calcium carbonate (precipitated)	(D)	19.5	7,279	(D)	51.2	9,610	(D)	(D)
28199 14	Calcium chloride	351.6	38.4	8,807	10.9	128.3	17,653	441.5	29.1
28199 18, 19, 22, 25, 28742 71	Calcium phosphates	1,781.0	147.6	75,857	8.3	9.2	10,336	1,642.6	0.6
28199 27	Carbon activated (granular and pulverized) ⁵	119.6	26.8	47,863	22.5	26.5	44,095	119.2	22.2
28199 35	Cuprous oxide	(D)	(NA)	(NA)	(NA)	0.2	682	(D)	(D)
28199 39	Hydrogen peroxide	253.9	46.1	32,856	18.2	47.3	30,289	255.1	18.5
28199 40	Iodine	0.8	1.7	15,147	198.2	3.7	33,134	2.8	129.0
28199 43	Iron oxides and hydroxides	6.7	23.1	39,604	345.4	11.2	13,850	-5.1	-218.3
28199 48	Magnesium chloride	282.4	3.9	2,348	1.4	4.6	1,879	283.0	1.6
28199 49	Magnesium sulfate	(D)	2.9	1,160	(D)	5.2	1,612	(D)	(D)
28199 51	Manganese dioxide	55.4	4.3	4,340	7.8	22.7	35,800	73.8	30.6
28199 53	Mercury	(D)	1.0	2,759	(D)	0.1	431	(D)	(D)
28199 5B	Molybdates	4.6	1.0	4,976	22.5	0.1	796	3.7	4.2

See footnotes at end of table.

Table 11. **PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS AND FERTILIZER MATERIALS: 1992 AND 1991—Continued**

[Quantity in thousands of metric tons; value in thousands of dollars]

Product code	Product description	Production (quantity)	Exports of domestic merchandise ¹		Percent exports to production (quantity)	Imports for consumption ²		Apparent consumption ⁴ (quantity)	Percent imports to apparent consumption (quantity)
			Quantity	Value		Quantity	Value ³		
	1992—Cont.								
28199 56	Nickel oxides and hydroxides	(D)	0.3	2,615	(D)	0.7	6,765	(D)	(D)
28199 57	Nickel chloride	(D)	0.1	410	(D)	0.7	1,691	(D)	(D)
28199 55	Nickel sulfate	(D)	0.7	1,810	(D)	2.9	5,980	(D)	(D)
28199 58	Phosphorous, elemental.....	245.5	17.9	32,783	7.3	3.9	10,330	231.5	1.7
28199 60, 63	Phosphorous, oxychloride and trichloride.....	101.3	1.5	3,392	1.5	-	689	99.7	-
28199 71	Strontium carbonate	(D)	0.8	754	(D)	20.6	12,937	(D)	(D)
28199 74	Sulfur, recovered elemental.....	7,048.0	735.1	42,294	10.4	2,627.7	127,463	8,940.6	29.4
28199 75	Sulfur dioxide	217.1	0.6	354	0.3	74.8	10,578	291.3	25.7
28199 84	Tungstates	(D)	0.5	3,505	(D)	1.1	5,675	(D)	(D)
28199 87	Zinc sulfate	33.3	2.8	1,666	8.5	3.8	2,405	34.3	11.2
28199 86	Zinc oxide and peroxide.....	34.3	5.6	7,263	16.3	38.2	49,375	66.9	57.1
28199 88	Zinc chloride.....	(D)	2.5	1,395	(D)	3.1	2,844	(D)	(D)
28163 13, 15, 17, 18, 19, 28422 43	Chrome colors	45.4	2.6	10,412	5.6	6.9	15,884	49.8	14.0
28199 15, 30, 28422 53	Bleaches (sodium and calcium hypochlorite,etc.)	645.6	31.4	32,360	4.9	14.8	15,372	629.0	2.3
28731 30, 32	Ammonia, synthetic anhydrous.....	16,586.7	(D)	(NA)	(D)	(D)	(NA)	(D)	(D)
28731 50	Ammonium nitrate, original solution.....	7,101.1	39.9	(NA)	0.6	443.3	(NA)	7,504.5	5.9
28731 66	Nitrogen solutions, ammonium nitrate/urea solutions	2,923.1	368.7	(NA)	12.6	108.1	(NA)	2,662.5	4.1
28731 56, 58	Ammonium sulfate.....	2,167.7	801.1	(NA)	37.0	335.8	(NA)	1,702.4	19.7
28732 —	Urea	8,141.9	913.3	(NA)	11.2	1,560.1	(NA)	8,788.7	17.8
28741 81, 85	Phosphoric acid	11,597.7	(D)	(NA)	(D)	12.5	(NA)	(D)	(D)
28742 15	Normal and enriched superphosphate ⁶	39.4	37.8	(NA)	95.9	0.2	(NA)	1.8	11.1
28742 41	Concentrated superphosphate ⁶	889.9	1,113.8	(NA)	125.2	-	(NA)	-223.9	-
28742 52	Diammonium phosphates ⁶	6,409.4	11,867.8	(NA)	185.2	22.5	(NA)	-5,435.9	-0.4
28193 —	Sulfuric acid, gross	40,671.2	143.4	(NA)	0.4	1,985.4	(NA)	42,513.2	4.7
	1991								
28121 11	Chlorine gas	10,491.6	40.7	10,646	0.4	268.9	22,456	10,719.8	2.5
28123 50	Sodium hydroxide, total liquid (all processes)	10,909.4	1,413.7	430,791	13.0	845.1	138,831	10,340.8	8.2
28125 21	Potassium hydroxide, liquid	(D)	87.2	45,720	(D)	36.0	7,587	(D)	(D)
28125 30	Finished sodium bicarbonate	(D)	36.3	13,769	(D)	9.5	4,728	(D)	(D)
28161 00	Titanium dioxide (composite and pure).....	992.7	189.7	349,515	19.1	113.6	212,062	916.6	12.4
28193 —	Sulfuric acid, gross	39,407.2	148.9	11,806	0.4	1,845.2	57,726	41,103.6	4.5
28194 11	Boric acid	(D)	47.1	35,457	(D)	5.0	4,258	(D)	(D)
28194 41, 45, 47	Hydrochloric acid.....	3,065.2	35.7	5,642	1.2	282.5	5,045	3,312.0	8.5
28194 61, 65	Hydrofluoric acid	146.9	8.1	11,092	5.5	95.1	97,710	233.9	40.7
28194 51, 67	Other inorganic acids	(D)	17.1	20,456	(D)	4.4	7,486	(D)	(D)
28194 98, 28195 00	Aluminum oxide	4,618.5	1,253.9	368,205	27.1	4,554.6	1,130,616	7,919.3	57.5
28196 13, 17	Aluminum chloride.....	32.8	3.0	3,476	9.0	8.2	7,532	38.1	21.6
28196 25	Aluminum hydroxide trihydrate	780.3	54.0	29,884	6.9	57.5	41,729	783.9	7.3
28196 27	Aluminum flouride	(D)	24.0	19,350	(D)	33.3	33,423	(D)	(D)
28196 51	Aluminum sulfate (commercial).....	1,081.2	4.4	1,019	0.4	21.7	4,201	1,098.5	2.0
28196 73	Aluminates (sodium aluminate, etc.).....	109.9	15.3	5,837	13.9	1.5	928	96.1	1.6
28197 13	Potassium iodide	0.9	0.1	1,772	13.6	0.1	503	0.9	6.1
28197 16	Potassium sulfate	477.7	-	-	-	59.3	11,947	536.9	11.0

See footnotes at end of table.

Table 11. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS AND FERTILIZER MATERIALS: 1992 AND 1991—Continued

[Quantity in thousands of metric tons; value in thousands of dollars]

Product code	Product description	Production (quantity)	Exports of domestic merchandise ¹		Percent exports to production (quantity)	Imports for consumption ²		Apparent consumption ⁴ (quantity)	Percent imports to apparent consumption (quantity)
			Quantity	Value		Quantity	Value ³		
	1991—Cont.								
28197 23	Potassium phosphates	10.7	3.9	3,547	35.9	2.5	2,547	9.4	26.7
28197 24	Potassium silicates	(D)	1.2	918	(D)	0.2	339	(D)	(D)
28197 21	Sodium metal	(D)	10.6	18,575	(D)	0.1	190	(D)	(D)
28197 27	Sodium chlorate	407.0	6.8	3,390	1.7	317.3	113,223	717.5	44.2
28197 84	Sodium sulfite	(D)	35.7	10,413	(D)	16.0	7,584	(D)	(D)
28197 32, 33	Sodium phosphate mono and dibasic	32.9	6.4	6,127	19.4	3.2	4,164	29.7	10.9
28197 34	Sodium phosphate tribasic	22.6	0.8	795	3.7	2.6	1,692	24.4	10.9
28197 38	Sodium phosphate tripoly	419.1	61.7	42,902	14.7	17.5	10,830	375.0	4.7
28197 41, 42, 45, 47	Sodium silicates (other than metasilicates)	808.5	13.8	6,965	1.7	4.6	2,676	799.3	0.6
28197 44	Sodium metasilicates	95.8	8.8	3,873	9.2	1.9	1,159	88.8	2.1
28197 61, 66	Sodium sulfate	729.6	103.0	14,452	14.1	162.0	15,133	788.6	20.5
28197 85	Sodium thiosulfate (hypo)	(D)	2.8	1,188	(D)	1.5	678	(D)	(D)
28199 05	Barium sulfate	(D)	0.5	500	(D)	9.7	8,421	(D)	(D)
28199 04	Barium carbonate	(D)	0.4	412	(D)	12.3	6,194	(D)	(D)
28199 10	Bromine	203.5	5.7	7,664	2.8	0.1	198	198.0	0.1
28199 12	Calcium carbide	(D)	9.7	5,298	(D)	14.5	6,965	(D)	(D)
28199 13	Calcium carbonate (precipitated) ...	(D)	17.0	6,861	(D)	44.8	9,338	(D)	(D)
28199 14	Calcium chloride	422.4	30.6	8,030	7.2	124.1	18,610	515.9	24.1
28199 18, 19, 22, 25, 28742 71	Calcium phosphates	1,725.7	143.0	76,330	8.3	7.8	8,854	1,590.5	0.5
28199 27	Carbon activated (granular and pulverized) ⁵	116.8	24.6	45,978	21.1	18.6	34,408	110.8	16.8
28199 35	Cuprous oxide	(D)	(NA)	(NA)	(NA)	0.4	1,038	(D)	(D)
28199 39	Hydrogen peroxide	230.4	46.3	33,938	20.1	41.9	27,276	225.9	18.6
28199 40	Iodine	0.9	1.4	15,784	158.2	3.5	35,594	3.0	116.6
28199 48	Magnesium chloride	273.6	3.0	2,134	1.1	7.2	2,406	277.8	2.6
28199 49	Magnesium sulfate	(D)	2.4	1,201	(D)	6.5	1,945	(D)	(D)
28199 51	Manganese dioxide	51.3	4.6	4,900	8.9	23.1	33,590	69.9	33.1
28199 53	Mercury	(D)	0.8	3,145	(D)	0.1	321	(D)	(D)
28199 58	Molybdates	4.1	0.7	3,965	18.0	0.1	829	3.5	4.0
28199 56	Nickel oxides and hydroxides	(D)	0.3	3,986	(D)	0.6	5,829	(D)	(D)
28199 57	Nickel chloride	0.4	0.2	434	38.1	0.9	2,234	1.1	77.4
28199 55	Nickel sulfate	(D)	0.4	1,773	(D)	3.4	7,569	(D)	(D)
28199 58	Phosphorous, elemental	277.0	17.0	30,419	6.1	9.0	17,152	269.0	3.3
28199 60, 63	Phosphorous, oxychloride and trichloride	136.8	0.6	2,935	0.4	0.1	907	136.3	0.0
28199 71	Strontium carbonate	(D)	1.8	1,446	(D)	14.9	9,851	(D)	(D)
28199 74	Sulfur, recovered elemental	6,645.0	885.4	83,071	13.3	2,996.2	293,863	8,755.8	34.2
28199 75	Sulfur dioxide	199.0	0.9	910	0.5	76.0	9,834	274.0	27.7
28199 84	Tungstates	(D)	0.8	4,578	(D)	3.6	18,228	(D)	(D)
28199 87	Zinc sulfate	30.3	2.5	1,383	8.3	4.6	2,515	32.4	14.2
28199 86	Zinc oxide and peroxide	28.6	6.7	8,755	23.2	37.1	42,875	59.1	62.8
28199 88	Zinc chloride	(D)	1.3	905	(D)	2.2	2,374	(D)	(D)
28163 13, 15, 17, 18, 19, 28422 43	Chrome colors	42.4	2.0	7,423	4.6	4.9	14,010	45.4	10.9
28199 15, 30, 28422 53	Bleaches (sodium and calcium hypochlorite, etc.)	607.7	31.3	33,795	5.2	12.5	15,549	589.0	2.1
28731 30, 32	Ammonia, synthetic anhydrous	15,565.9	(D)	(NA)	(D)	(D)	(NA)	(D)	(D)
28731 50	Ammonium nitrate, original solution	7,089.0	36.9	(NA)	0.5	421.3	(NA)	7,473.4	5.6
28731 66	Nitrogen solutions, ammonium nitrate/urea solutions	2,876.0	278.5	(NA)	9.7	217.9	(NA)	2,815.4	7.7
28731 56, 58	Ammonium sulfate	2,033.5	681.0	(NA)	33.5	311.3	(NA)	1,663.8	18.7
28732 —	Urea	7,373.3	970.9	(NA)	13.2	1,619.1	(NA)	8,021.5	20.2

See footnotes at end of table.

Table 11. **PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS AND FERTILIZER MATERIALS: 1992 AND 1991—Continued**

[Quantity in thousands of metric tons; value in thousands of dollars]

Product code	Product description	Production (quantity)	Exports of domestic merchandise ¹		Percent exports to production (quantity)	Imports for consumption ²		Apparent consumption ⁴ (quantity)	Percent imports to apparent consumption (quantity)
			Quantity	Value		Quantity	Value ³		
	1991—Cont.								
28741 81, 85	Phosphoric acid	10,978.6	(D)	(NA)	(D)	11.3	(NA)	(D)	(D)
28742 15	Normal and enriched superphosphate ⁶	44.5	31.2	(NA)	70.1	0.7	(NA)	14.0	5.0
28742 41	Concentrated superphosphate ⁶	821.9	827.1	(NA)	100.6	-	(NA)	-5.2	-
28742 52	Diammonium phosphates ⁶	6,049.6	8,828.5	(NA)	145.9	7.2	(NA)	-2,771.7	-0.3
28193 —	Sulfuric acid, gross	39,407.2	148.9	(NA)	0.4	1,845.2	(NA)	41,103.5	4.5

Note: For comparison of Standard Industrial Classification codes, Schedule B export numbers, and HTSUSA import numbers, see appendix B.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.²Source: Bureau of the Census report IM 146, *U.S. Imports for Consumption*.³This dollar value represents c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus calculated import duty.⁴Apparent consumption is derived by subtracting exports from manufacturers' production plus imports. Apparent consumption does not include any adjustments for changes in inventories.⁵Includes reactivated carbon.⁶The phosphatic fertilizer materials production figures are collected and published on a 100% P₂O₅ basis; however, the import and export figures are collected and published on a gross weight basis. Due to the difference in the basis, the production, import, and export data are not comparable.

HISTORICAL NOTE

Data on inorganic chemicals and fertilizer materials have been collected by the Bureau of the Census since 1941. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Lissene Hafenrichter, 301-763-2541, for inorganic chemicals; Walter R. Hunter, Jr., 301-763-4490, for fertilizer materials.

4.2 INDUSTRIAL GASES

INTRODUCTION

The data in this subsection are from surveys MQ28C and MA28C, Industrial Gases. The data shown are production, quantity, and value of shipments. Gases which are vented or used for fuel by the manufacturer are excluded.

SUMMARY OF FINDINGS

In 1992, total manufacturers' shipments of industrial gases amounted to \$3,056.2 million, an increase of 3.5 percent from the 1991 shipments of \$2,952.8 million.

Total shipments of carbon dioxide decreased 3.9 percent to \$359.8 million in 1992, from \$374.3 million in 1991. Carbon dioxide gas decreased 23.7 percent to \$58.2 million in 1992, from \$76.3 million in 1991. Carbon dioxide liquid increased 2.8 percent to \$274.8 million in 1992, from \$267.4 million in 1991; however, solid carbon dioxide (dry ice) decreased 12.9 percent in 1992, bringing its value to \$26.9 million from a 1991 value of \$30.6 million.

Total production of nitrogen increased 8.5 percent to 835.2 billion cubic feet in 1992, from 770.0 billion in 1991; however, shipments of nitrogen increased 3.1 percent to \$983.6 million in 1992, from \$953.7 million in 1991. Production of nitrogen gas increased 10.8 percent in 1992 to 591.1 billion cubic feet, from 532.8 billion in 1991; but shipments of nitrogen gas increased less than 1 percent to \$416.9 million in 1992, from \$414.9 in 1991. Production of liquid nitrogen for merchant shipments increased 1.0 percent in 1992 to 210.3 billion cubic feet, from 208.4 billion in 1991; however, shipments increased 3.6 percent to \$525.5 million in 1992, from \$507.0 million in 1991.

Total production of oxygen increased 11.8 percent to 525.0 billion cubic feet in 1992, from 469.7 billion in 1991; but shipments of oxygen increased 4.7 percent to \$802.9 million in 1992, from \$767.0 million in 1991. Production of oxygen gas increased 13.3 percent in 1992 to 389.3 billion cubic feet, from 343.5 billion in 1991; however, shipments of oxygen gas increased 2.6 percent to \$503.6 million in 1992, from \$490.7 in 1991. Production of liquid oxygen for

merchant shipments increased 5.0 percent in 1992 to 101.2 billion cubic feet, from 96.4 billion in 1991; however, shipments increased 5.9 percent to \$272.6 million in 1992, from \$257.4 million in 1991.

Total production of hydrogen increased 5.9 percent to 161.7 billion cubic feet in 1992, from 152.7 billion in 1991; but shipments of hydrogen increased 9.8 percent to \$249.1 million in 1992, from \$226.8 million in 1991.

EXPLANATION OF TERMS

Carbon Dioxide. Includes all gas produced that is not vented, regardless of whether it will be used as a gas or to make liquid or solid. Also includes natural carbon dioxide produced from well operations. Excludes amounts produced and consumed in the manufacture of urea or soda ash.

Hydrogen. Excludes amounts produced and consumed in the manufacture of synthetic ammonia, synthetic methanol, petroleum products (hydrocracking and hydrotreating), and amounts produced by the ammonia dissociation process (cracking of ammonia).

Nitrogen/Oxygen. Excludes amounts produced and consumed in the manufacture of synthetic ammonia and ammonia derivatives.

Production. Data shown for production represent total quantity of each chemical produced, including quantity consumed in plants, and for sale or transfer to other plants or warehouses of the same company. The statistics presented in the tables provide an up-to-date measure of activity in the inorganic field, but do not necessarily indicate amounts entering the market. In some cases, figures are included for material produced "in process" as an intermediate to the end products.

Unit of Measure. All figures included in this report are shown in million cubic feet, 70 degrees Fahrenheit, at 1 atmosphere pressure, unless otherwise specified.

Table 12. PRODUCTION AND SHIPMENTS OF SELECTED INDUSTRIAL GASES: 1989 TO 1992

[Value in millions of dollars]

Product code	Product and year	Unit of measure	Production	Shipments	
				Quantity	Value
28132 00	Acetylene	1992 Billion cu. ft.	5.3	2.9	137.9
		1991 .....do	5.5	'2.9	'135.7
		1990 .....do	5.5	3.7	153.9
		1989 .....do	5.4	3.3	135.3
28133 00	Carbon dioxide: Gas	1992 1,000 short tons	6,916.9	6,538.5	58.2
		1991 .....do	7,949.4	'7,644.7	'76.3
		1990 .....do	7,890.4	7,890.4	87.8
		1989 .....do	(S)	(S)	(S)
	Liquid.....	1992 .....do	5,179.1	5,052.1	274.8
		1991 .....do	5,001.2	4,853.2	'267.4
		1990 .....do	4,925.2	4,877.2	262.2
		1989 .....do	5,037.4	4,933.6	251.4
	Solid (dry ice).....	1992 .....do	260.4	259.6	26.9
		1991 .....do	267.2	266.6	30.6
		1990 .....do	260.8	260.7	30.0
		1989 .....do	301.6	301.3	35.1
28135 00	Nitrogen	1992 Billion cu. ft.	835.2	811.3	983.6
		1991 .....do	769.9	753.1	'953.7
		1990 .....do	749.5	723.5	791.1
		1989 .....do	744.1	705.9	766.2
28136 00	Oxygen	1992 .....do	525.0	498.7	802.9
		1991 .....do	469.7	446.6	'767.0
		1990 .....do	462.3	436.2	662.9
		1989 .....do	460.7	439.1	644.6
28137 pt.	Hydrogen	1992 .....do	161.7	84.0	249.1
		1991 .....do	152.7	79.9	226.8
		1990 .....do	147.8	72.1	226.4
		1989 .....do	145.5	72.9	217.2

pt. Part. 'Revised by 5 percent or more from previously published figures.
Bureau of the Census.

(S) Suppressed. Data did not meet publication standards of the

Table 13. QUANTITY OF PRIMARY PRODUCTION OF SPECIFIED INDUSTRIAL GASES: 1992 AND 1991

[Production and quantity of shipments in million cubic feet; value in thousands of dollars]

Product code	Product description	Unit of measure	1992			1991		
			Production	Shipments		Production	Shipments	
				Quantity	Value		Quantity	Value
2813 —	Industrial gases	(X)	(X)	(X)	3,056,224	(X)	(X)	'2,952,793
28132 00	Acetylene ¹	Million cu. ft.	5,276	2,920	137,863	5,524	'2,935	'135,673
28132 11	Produced for compression, including cylinder and pipeline	do.	704	703	70,435	801	790	71,453
28132 21	Produced for pipeline shipment, excluding that shipped to be compressed, and for consumption in this plant	do.	4,572	2,217	67,428	4,723	'2,145	'64,220
28133 00	Carbon dioxide ²	Short tons	12,356,351	11,850,224	359,829	13,217,766	12,764,444	374,284
28133 01	Gas including amounts produced and liquefied	do.	6,916,876	6,538,510	58,181	7,949,350	'7,644,729	'76,272
28133 02	Liquid, including amounts produced and used to make dry ice	do.	5,179,100	5,052,094	274,753	5,001,246	4,853,155	'267,392
28133 31	Solid (dry ice)	do.	260,375	259,620	26,895	267,170	266,560	30,620
28135 00	Nitrogen ³	Million cu. ft.	835,217	811,257	983,557	769,896	753,055	'953,723
28135 22	Gas produced by:							
28135 22	Cryogenic on-site and pipeline AND							
28135 23	Noncryogenic processes (psa, vpsa, membranes, etc.) by industrial gas-producing companies							
28135 24	Captive uses for consumption in this plant:							
28135 26	Cryogenic processes AND		590,050	589,121	416,876	532,837	532,780	414,919
28135 26	Noncryogenic processes (psa, vpsa, membranes, etc.)	do.		(X)	(X)		(X)	(X)
28135 12	Liquid produced for:							
28135 32	Merchant shipment	do.	210,263	209,774	525,489	'208,397	'207,967	'506,975
28135 32	Consumption in this plant	do.	(⁴)	(X)	(X)	(⁴)	(X)	(X)
28135 34	Supplemental shipments or uses	do.	12,465	12,362	41,192	12,630	12,308	'31,829
28136 00	Oxygen	do.	524,994	498,703	802,921	469,748	446,577	'767,014
28136 22	Gas produced by:							
28136 22	Cryogenic on-site and pipeline AND							
28136 23	Noncryogenic processes (psa, vpsa, membranes, etc.) by industrial gas-producing companies							
28136 24	Captive uses for consumption in this plant:							
28136 26	Cryogenic processes AND		389,273	389,290	503,589	343,476	343,016	490,734
28136 26	Noncryogenic processes (psa, vpsa, membranes, etc.)	do.		(X)	(X)		(X)	(X)
28136 12	Liquid produced for:							
28136 32	Merchant shipment	do.	101,219	101,225	272,610	96,353	96,324	257,438
28136 32	Consumption in this plant	do.	(⁵)	(X)	(X)	(⁵)	(X)	(X)
28136 34	Supplemental shipments or uses	do.	8,190	8,188	26,722	7,272	7,237	'18,842
28137 00	Elemental gases and other industrial gases, n.e.c.							
28137 00	Argon	do.	(X)	(X)	731,215	(X)	(X)	683,135
28137 11	Argon, crude	do.	(D)	(D)	(D)	(D)	(D)	(D)
28137 15	Argon, high purity, produced for cylinder and bulk delivery and pipeline shipments, and for consumption in this plant	do.	(D)	(D)	(D)	(D)	(D)	(D)
28137 15	Helium ⁶	do.	13,922	13,718	261,124	13,338	13,426	246,382
28137 15	Hydrogen ⁷	do.	3,403	3,403	(X)	3,176	3,176	(X)
28137 15		do.	161,728	84,049	249,076	152,704	79,893	226,760

See footnotes at end of table.

Table 13. QUANTITY OF PRIMARY PRODUCTION OF SPECIFIED INDUSTRIAL GASES: 1992 AND 1991—Continued

[Production and quantity of shipments in million cubic feet; value in thousands of dollars]

Product code	Product description	Unit of measure	1992			1991		
			Production	Shipments		Production	Shipments	
				Quantity	Value		Quantity	Value
28137 00	Elemental gases and other industrial gases—Cont.							
28137 22	Gas produced for:							
28137 32	Merchant shipment AND							
28137 32	Pipeline and on-site use.....	do.....	^a 84,365	84,049	249,076	^a 80,202	79,893	226,760
28137 42	Consumption in this plant.....	do.....	77,363	(X)	(X)	72,502	(X)	(X)
	Liquid produced for:							
28137 52	Merchant shipment AND							
28137 62	Supplemental shipments or uses.....	do.....	^b	^b	^b	^b	^b	^b
28137 90	Other elemental gases.....	do.....	(X)	(X)	77,933	(X)	(X)	75,940
28137 71	Nitrous oxide AND	do.....						
28137 98	Other compressed and liquefied gases ^a	do.....	(X)	(X)	121,012	(X)	(X)	119,476
28130 00	Industrial gases n.s.k.	do.....	(X)	(X)	40,839	(X)	(X)	38,964

Note: N.s.k. represents the value of shipments for establishments which did not provide detailed information by type of product. These establishments, typically with less than five employees, are not included on the MA28C mailing panel. The n.s.k. value has been estimated based on the rate of change for the reporting establishments, applied to the previous year's figures.

(D) Data withheld to avoid disclosing figures for individual companies. n.e.c. Not elsewhere classified. n.s.k. Not specified by kind. ^aRevised by 5 percent or more from previously published figures. (X) Not applicable.

¹Excludes information from railroad ships, shipyards, welding shops, and small establishments using portable generators.

²Excludes quantities produced and consumed in plants manufacturing soda ash or urea. "Carbon dioxide gas" figures should be used with caution since the data includes figures for gas produced in the production of petroleum whose data is difficult to measure.

³Excludes amounts produced and consumed in the manufacturing of synthetic ammonia or ammonia derivatives.

⁴Product code 28135 32 has been combined with product codes 28135 24 and 28135 26 to avoid disclosing figures for individual companies.

⁵Product code 28136 32 has been combined with product codes 28136 24 and 28136 26 to avoid disclosing figures for individual companies.

⁶Source: U.S. Department of Interior, Bureau of Mines.

⁷Excludes amounts vented, used as fuel, etc., and amounts produced and consumed in the manufacturing of synthetic ammonia and methanol, but includes an unspecified amount produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts produced by the ammonia dissociation process (cracking of ammonia). Also excludes amounts produced in petroleum refineries for captive use.

⁸Product codes 28137 52 and 28137 62 are combined with product codes 28137 22 and 28137 32 to avoid disclosing figures for individual companies.

⁹Excludes hydrocarbon gases such as propane, butane, and propylene, or halogenated hydrocarbons and cyclopropane, which are published in the U.S. International Trade Commission annual report, *Synthetic Organic Chemicals*. Also, excludes sulfur dioxide and chlorine data, which are shown in Current Industrial Reports Series, MA28A, *Inorganic Chemicals*.

Table 14. **PRODUCTION AND SHIPMENTS OF ACETYLENE, BY GEOGRAPHIC AREA: 1992 AND 1991**

[Production and quantity in million cubic feet; value in thousands of dollars]

Geographic area	1992			1991		
	Production	Shipments		Production	Shipments	
		Quantity	Value		Quantity	Value
Total	5,276	2,920	137,863	5,524	'2,935	'135,673
Northeast Region	67	70	4,785	182	182	11,986
North Central Region	220	218	19,863	236	237	20,750
East North Central	155	152	13,714	187	188	16,459
West North Central	65	66	6,149	'49	'49	'4,291
South Region	4,862	2,503	94,568	4,957	2,367	87,244
South Atlantic and East South Central	614	612	36,737	'675	'667	'38,537
West South Central	4,248	1,891	57,831	4,282	'1,700	'48,707
West Region	127	129	18,647	149	149	15,693
Mountain	20	19	2,545	22	22	2,228
Pacific	107	110	16,102	'127	'127	'13,465

See note at end of table 17.

'Revised by 5 percent or more from previously published figures.

Table 15. **PRODUCTION AND SHIPMENTS OF CARBON DIOXIDE, BY GEOGRAPHIC AREA: 1992 AND 1991**

[Production and quantity in short tons; value in thousands of dollars]

Geographic area	Liquid			Solid		
	Production	Shipments		Production	Shipments	
		Quantity	Value		Quantity	Value
1992						
Total	5,179,100	5,052,094	274,753	260,375	259,620	26,895
Northeast Region	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
North Central Region	1,385,740	1,319,461	65,536	166,614	165,357	15,320
East North Central	'861,966	'823,279	'38,621	'84,151	'84,163	'8,943
West North Central	523,774	496,182	26,915	82,463	81,194	6,377
South Region	2,692,250	2,617,164	135,790	49,556	50,058	5,960
South Atlantic and East South Central	1,662,429	1,654,221	91,872	(D)	(D)	(D)
West South Central	1,029,821	962,943	43,918	(D)	(D)	(D)
West Region	1,101,110	1,115,469	73,427	44,205	44,205	5,615
Mountain	347,055	327,957	17,427	(D)	(D)	(D)
Pacific	754,055	787,512	56,000	(D)	(D)	(D)
1991						
Total	5,001,246	4,853,155	'267,392	267,170	266,560	30,620
Northeast Region	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
North Central Region	1,316,821	1,251,833	62,632	169,381	169,081	17,551
East North Central	'843,948	'804,979	'38,771	'95,086	'95,086	'11,433
West North Central	'472,873	'446,854	23,861	74,295	73,995	6,118
South Region	2,610,896	2,561,940	138,469	'50,660	'50,350	'7,013
South Atlantic and East South Central	1,602,180	1,598,777	90,883	(D)	(D)	(D)
West South Central	'1,008,716	'963,163	47,586	(D)	(D)	(D)
West Region	1,073,529	1,039,382	66,291	47,129	47,129	6,056
Mountain	'344,962	'325,931	17,091	(D)	(D)	(D)
Pacific	'728,567	'713,451	49,200	(D)	(D)	(D)

See note at end of table 17.

'Revised by 5 percent or more from previously published figures.

¹Totals for Northeast Region are combined with East North Central to avoid disclosing figures for individual companies.

Table 16. **PRODUCTION AND SHIPMENTS OF ARGON AND HYDROGEN, BY GEOGRAPHIC AREA: 1992 AND 1991**

[Production and quantity in short tons; value in thousands of dollars]

Geographic area	Argon						Hydrogen					
	1992			1991			1992			1991		
	Production	Shipments		Production	Shipments		Production	Shipments		Production	Shipments	
		Quantity	Value		Quantity	Value		Quantity	Value		Quantity	Value
Total	(D)	(D)	(D)	(D)	(D)	(D)	161,728	84,049	249,076	152,704	79,893	226,760
Northeast Region	1,185	1,189	21,116	1,075	1,096	18,736	9,762	8,358	27,946	9,908	8,805	32,584
North Central Region	(D)	(D)	(D)	(D)	(D)	(D)	6,097	2,530	7,474	5,748	1,942	4,762
East North Central Division	5,092	5,093	103,573	4,712	4,744	98,802	(D)	(D)	(D)	(D)	(D)	(D)
West North Central Division	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
South Region	7,764	7,558	135,452	7,060	7,093	118,168	133,983	(D)	(D)	124,592	(D)	(D)
South Atlantic Division	1,512	1,512	31,011	1,359	1,376	28,656	8,667	2,356	(D)	8,400	2,343	(D)
East South Central Division	1,323	1,116	25,124	984	991	17,515	4,010	(D)	(D)	3,238	(D)	(D)
West South Central Division	4,929	4,930	79,317	4,717	4,726	71,997	121,306	67,646	184,806	112,954	63,979	164,167
West Region	1,171	1,167	23,564	1,077	1,080	21,496	11,886	(D)	(D)	12,456	(D)	(D)

See note at end of table 17.

(D) Data withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously published figures.

Table 17. **PRODUCTION AND SHIPMENTS OF LIQUID NITROGEN AND OXYGEN PRODUCED FOR MERCHANT SHIPMENT, BY GEOGRAPHIC AREA: 1992 AND 1991**

[Production and quantity in short tons; value in thousands of dollars]

Geographic area	Nitrogen						Oxygen					
	1992			1991			1992			1991		
	Production	Shipments		Production	Shipments		Production	Shipments		Production	Shipments	
		Quantity	Value		Quantity	Value		Quantity	Value		Quantity	Value
Total	210,263	209,774	525,489	208,397	207,967	506,975	101,219	101,225	272,610	96,353	96,324	257,438
Northeast Region	38,099	37,489	80,027	37,245	36,933	86,051	15,937	15,956	37,201	14,384	13,872	32,609
North Central Region	60,313	60,415	145,758	55,975	56,062	127,457	27,596	27,617	68,985	26,615	26,954	67,635
East North Central Division	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
West North Central Division	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
South Region	70,537	70,570	183,292	73,051	73,008	181,883	42,692	42,656	120,083	39,450	39,538	110,689
South Atlantic Division	28,660	28,663	73,916	30,727	30,712	75,832	20,509	20,523	54,289	18,481	18,475	49,818
East South Central Division	12,842	12,809	32,132	11,865	11,807	27,856	10,241	10,201	26,816	9,065	9,089	23,396
West South Central Division	29,035	29,098	77,244	30,459	30,489	78,195	11,942	11,932	38,978	11,904	11,974	37,475
West Region	41,314	41,300	116,412	42,126	41,964	111,584	14,994	14,996	46,341	15,904	15,960	46,505

Note: Northeast Region: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania. North Central Region: East North Central Division - Ohio, Indiana, Illinois, Michigan, and Wisconsin; West North Central Division - Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas. South Region: South Atlantic Division - Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida; East South Central Division - Kentucky, Tennessee, Alabama, and Mississippi; West South Central Division - Arkansas, Louisiana, Oklahoma, and Texas; West Region: Mountain - Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada; Pacific - Washington, Oregon, California, Alaska, and Hawaii.

(D) Data withheld to avoid disclosing figures for individual companies.

'Revised by 5 percent or more from previously published figures.

Table 18. QUANTITY OF PRIMARY PRODUCTION OF SPECIFIED INDUSTRIAL GASES: 1992 AND 1991

[Production in million cubic feet, except where otherwise noted]

Product code	Product description	1992					1991				
		Total	First quarter	Second quarter	Third quarter	Fourth quarter	Total	First quarter	Second quarter	Third quarter	Fourth quarter
28132 00	Acetylene ¹	5,276	1,327	1,276	1,317	1,356	5,524	1,410	1,361	1,361	1,392
28132 11	Produced for compression, including cylinder and pipeline.....	'704	'190	'177	'166	'171	801	206	208	189	198
28132 21	Produced for pipeline shipment, excluding that shipped to be compressed, and for consumption in this plant.....	4,572	(S)	(S)	(S)	(S)	4,723	(S)	(S)	(S)	(S)
28133 01	Carbon dioxide: ² Gas, including amounts produced and liquefied (short tons).....	6,916,876	(S)	(S)	(S)	(S)	7,949,350	(S)	(S)	(S)	(S)
28133 02	Liquid, including amounts produced and used to make dry ice (short tons).	5,179,100	(S)	(S)	(S)	(S)	5,001,246	1,197,201	1,279,023	1,250,750	1,274,272
28133 31	Solid (dry ice) (short tons).....	260,375	62,004	63,869	66,754	67,748	267,170	63,479	67,683	70,253	65,755
28137 15	Argon, high purity: Produced for cylinder and bulk delivery and pipeline shipments, and for consumption in this plant.....	13,922	3,256	3,405	3,587	3,674	13,338	3,373	3,335	3,258	3,372
	Hydrogen ³	161,728	38,278	38,906	41,994	42,550	152,704	37,288	36,983	39,341	39,092
28137 22	Gas produced for: Merchant shipment AND	4 '84,365	4 '19,285	4 '20,307	4 '22,276	4 '22,497	480,202	419,758	419,838	420,521	420,085
28137 32	Pipeline and on-site use.....	'77,363	'18,993	'18,599	'19,718	'20,053	72,502	17,530	17,145	18,820	19,007
28137 42	Consumption in this plant.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
28137 52	Liquid produced for: Merchant shipment.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
28137 62	Other shipments or uses.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
28135 00	Nitrogen ⁵	835,217	202,564	206,934	212,288	213,431	769,896	189,750	199,769	194,976	185,401
28135 22	Gas produced by: Cryogenic on-site and pipeline AND										
28135 23	Noncryogenic processes (psa, vpsa, membranes, etc.) by industrial gas-producing companies.....	590,050	143,022	145,798	150,490	150,740	532,837	131,700	141,003	134,749	125,385
	Captive uses for consumption in this plant (user-owned): Cryogenic processes AND										
28135 24	Noncryogenic processes (psa, vpsa, membranes, etc.).....	6 '22,439	6 '6,077	6 '5,714	6 '5,323	6 '5,325	6 '16,032	6 '4,527	6 '3,802	6 '3,777	6 '3,926
28135 26	Liquid produced for: Merchant shipment.....	210,263	50,114	52,446	53,521	54,182	'208,397	'50,396	'52,006	'52,995	'53,000
28135 12	Consumption in this plant.....	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)
28135 32	Other shipments or uses.....	'12,465	'3,351	'2,976	'2,954	'3,184	'12,630	'3,127	'2,958	'3,455	'3,090
28135 34											
28136 00	Oxygen.....	524,994	124,478	129,060	135,463	135,993	469,748	116,966	113,551	119,168	120,063
28136 22	Gas produced by: Cryogenic on-site and pipeline AND										
28136 23	Noncryogenic processes (psa, vpsa, membranes, etc.) by industrial gas-producing companies.....	389,273	90,793	95,224	101,626	101,630	343,476	85,068	81,278	87,904	89,226

See footnotes at end of table.

Table 18. QUANTITY OF PRIMARY PRODUCTION OF SPECIFIED INDUSTRIAL GASES: 1992 AND 1991—Continued

[Production in million cubic feet, except where otherwise noted]

Product code	Product description	1992				1991					
		Total	First quarter	Second quarter	Third quarter	Fourth quarter	Total	First quarter	Second quarter	Third quarter	Fourth quarter
28136 24 28136 26	Oxygen—Cont. Captive uses for consumption in this plant (user owned): Cryogenic processes AND Noncryogenic processes (psa, vpsa, membranes, etc.)	7 '26,312	7 '6,460	7 '6,668	7 '6,601	7 '6,583	7 '22,647	7 '5,583	7 '6,553	7 '5,431	7 '5,080
28136 12 28136 32 28136 34	Liquid produced for: Merchant shipment Consumption in this plant..... Other shipments or uses	101,219 () 8,190	25,192 () 2,033	25,217 () 1,951	24,989 () 2,247	25,821 () 1,959	96,353 () 7,272	24,530 () 1,785	23,906 () 1,814	23,992 () 1,841	23,925 () 1,832

¹Revised by 5 percent or more from previously published figures.

(S) Suppressed. Data did not meet the publication standards of the Bureau of the Census.

²Excludes information from railroad, ships, shipyards, welding shops, and small establishments using portable generators.³Excludes quantities produced and consumed in plants manufacturing soda ash and urea.⁴Excludes amounts vented, used as fuel, etc., and amounts produced and consumed in the manufacturing of synthetic ammonia and methanol, but includes an unspecified amount produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts produced by the ammonia dissociation process (cracking of ammonia). Also excludes amounts produced in petroleum refineries for captive use.⁵Product codes 28137 52 and 28137 62 have been combined with product codes 28137 22 and 28137 32 to avoid disclosing figures for individual companies.⁶Excludes amounts produced and consumed in the manufacturing of synthetic ammonia derivatives.⁷Product code 28135 32 has been combined with product codes 28135 24 and 28135 26 to avoid disclosing figures for individual companies.⁸Product code 28136 32 has been combined with product codes 28136 24 and 28136 26 to avoid disclosing figures for individual companies.

Table 19. **PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF INDUSTRIAL GASES: 1992 AND 1991**

Product code	Product description	Unit of measure	Manufacturers' production	Exports of domestic merchandise ¹	Percent exports to manufacturers' production	Imports for consumption ²	Apparent consumption ³	Percent imports to apparent consumption
1992								
28133 01, 02, 31	Carbon dioxide (gas, liquid, and solid) . .	Metric tons	11,202,494	208,005	1.9	21,999	11,016,488	0.2
28137 15	Argon	Mil. cu. meters . .	390	81	20.8	21	330	6.4
28137 22, 32, 42, 52, 62	Hydrogen	Mil. cu. meters . .	4,529	43	0.9	120	4,606	2.6
28135 00	Nitrogen	Mil. cu. meters . .	23,389	47	0.2	57	23,399	0.2
28136 00	Oxygen	Mil. cu. meters . .	14,702	56	0.4	6	14,652	-
1991								
28133 01, 02, 31	Carbon dioxide (gas, liquid, and solid) . .	Metric tons	11,983,469	30,942	0.3	45,199	11,997,726	0.4
28137 15	Argon	Mil. cu. meters . .	374	72	19.3	22	324	6.8
28137 22, 32, 42, 52, 62	Hydrogen	Mil. cu. meters . .	4,276	54	1.3	107	4,329	2.5
28135 00	Nitrogen	Mil. cu. meters . .	21,560	56	0.3	56	21,560	0.3
28136 00	Oxygen	Mil. cu. meters . .	13,154	51	0.4	6	13,109	-

Note: For comparison of Standard Industrial Classification (SIC)-Based product codes, Schedule B export numbers, and HTSUSA import numbers, see appendix B.

- Less than one-tenth of one percent.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.

²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.

³"Apparent consumption" is derived by subtracting "Exports" from the total of "Production" plus "Imports."

HISTORICAL NOTE

Data on industrial gases have been collected by the Bureau of the Census since 1941. Prior to 1991, data were collected both monthly and annually. Beginning in 1991, as a result of budget reductions, the monthly series was canceled and replaced with a similar quarterly series. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are

also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Suzanne Pasdar, 301-763-4485, or David J. Gromos, 301-763-7809.

4.3 PAINT, VARNISH, AND LACQUER

INTRODUCTION

The data in this subsection were collected in the Current Industrial Report surveys MQ28F and MA28F, Paint and Allied Products. The data consist of quarterly and annual statistics on manufacturers' shipments of paint and allied products for 1992 and 1991. The annual statistics are based on reported data from approximately 500 companies having 20 or more employees and represent approximately 95 percent of the paint industry (SIC 2851). Estimates are used for companies with less than 20 employees, as well as for those companies whose reports were not received in time for publication.

SUMMARY OF FINDINGS

The actual quantity and value of shipments tabulated from the annual report are shown in table 21. As noted in table 20, these figures are then adjusted to represent the total shipments in the paint industry. These adjustments are used because the annual survey panel was selected to measure approximately 95 percent of the paint industry. The adjustment factors are: 1.00 for architectural coatings, 1.04 for product coatings OEM, 1.06 for special-purpose coatings, and 1.16 for miscellaneous paint products. The adjustment factors based on 1987 Census of Manufactures' relationships bring each product class total to 100 percent. Quarterly figures for 1992 and 1991 reflecting the adjusted totals are shown along with the originally published figures from Current Industrial Reports quarterly series MQ28F, Paint, Varnish, and Lacquer.

In 1992, total manufacturers' shipments of paint and allied products amounted to \$13,603.5 million, an increase of 4.6 percent from the 1991 shipments of \$13,009.4 million.

Total shipments of architectural coatings increased 5.4 percent to \$5,164.3 million in 1992, from \$4,900.7 million in 1991. Value of exterior coatings amounted to \$2,032.7 million in 1992, an increase of 1.2 percent from the 1991 value of \$2,008.0 million. Shipments of interior coatings in 1992 amounted to \$2,952.8 million, an increase of 9.0 percent from \$2,710.2 million in 1991. Architectural lacquers decreased 4.9 percent to \$79.2 million in 1992, from a 1991 value of \$83.3 million.

Total shipments of OEM coatings increased 6.9 percent to \$4,283.1 million in 1992, from \$4,005.4 million in 1991. Shipments of automobile finishes, amounted to \$895.0 million in 1992, a decrease of 1.8 percent from the \$911.8 million in 1991. Powder coatings increased 16.2 percent to \$337.7 million in 1992, from \$290.5 million in 1991.

Total shipments of special-purpose coatings decreased 3.7 percent to \$2,802.1 million in 1992, from \$2,910.8 million in 1991. Shipments of automotive and other transportation paints and enamels, including primers, decreased

6.9 percent to \$1,144.9 in 1992, from \$1,230.0 in 1991. Shipments of marine paints, increased 4.2 percent to \$277.6 million in 1992, from \$266.3 million in 1991.

Shipments of miscellaneous allied paint products increased 13.5 percent to \$1,354.0 million in 1992, from \$1,192.5 million in 1991.

EXPLANATION OF TERMS

Architectural Coatings. Coatings for on-site application to interior or exterior surfaces of residential, commercial, institutional, or industrial buildings. These are protective and decorative finishes applied at ambient temperatures for ordinary use and exposure.

Clear Finishes. Transparent protective and/or decorative films, including urethane coatings, natural varnishes, and shellac varnishes.

Eggshell Finish. Low sheen (semi-matte) surface which exhibits surface reflectance (gloss) similar to that of an eggshell, lying between flat and semigloss.

Enamels. Topcoats with the ability to form a smooth surface; usually associated with a high gloss, but also used with lesser gloss, i.e., flat enamels.

Primer. First complete coat of a painting system applied to a surface. Designed to provide adequate adhesion to new surfaces and to meet special requirements such as absorption and/or corrosion control.

Stains. Transparent and semitransparent solutions or suspensions of coloring matter in a vehicle, designed to color a surface by penetration without hiding it, or to color a material into which it is incorporated.

Solvent. Non-aqueous liquid, usually volatile, used to dissolve or disperse the coating constituents. This liquid evaporates during drying and does not become part of the dried coating.

Lacquers. Coatings composition based on synthetic thermoplastic materials dissolved in organic solvent, which dries primarily by solvent evaporation. Typical lacquers include those based on nitrocellulose and other cellulose derivations, vinyl resins, and acrylic resins.

Undercoat. A coat of paint applied on a new wood, over a primer, or over a previous coat of paint, to improve the seal and to serve as base for the top coat.

Exterior Coatings. Architectural coatings that are expected to possess reasonable durability when exposed to natural weathering.

Miscellaneous Paint Products. Includes thinners for dopes, lacquers, and oleoresinous thinners, including mixtures and proprietary thinners (sold as such); aerosol paints made from purchased paint, both exterior and interior; organosols and plastisols, other than coatings; paint and varnish driers; and miscellaneous related paint products, e.g., pigment dispersions, ink vehicles, and bleached shellac (not varnish)

Putty and Allied Products. Includes wood and textile preservatives (nonpressure type) such as wood fillers and sealers, putty and glazing compounds, paint and varnish removers, and other allied paint products, including brush cleaners.

(Source: *Paint/Coatings Dictionary*, Federation of Societies for Coatings Technology, 1978)

OEM Coatings. Coatings formulated specifically for Original Equipment Manufacturers (OEM) to meet conditions of application and product requirements, and applied to such products during the manufacturing process.

Powder Coatings. 100-percent solid coatings applied as dry powders and subsequently formed into a film with heat.

Electrical Insulating Coatings. Coatings (varnishes), often used in combination with materials such as mica, fabric, and paper, to provide insulation for electrical equipment. These coatings are formulated to have high resistance to electrical conduction.

Quantity and Value of Shipments. Shipments are collected in thousands of gallons and thousands of dollars. The only exception to this is powder coatings which are collected in pounds and converted to gallons by using a conversion factor of 3 (3 lb = 1 gallon).

Special-Purpose Coatings; Including Coatings for Transportation After Market. These may also be stock type or shelf goods, but differ from general architectural coatings by the fact that they are formulated for special applications and/or special environmental conditions such as extreme temperatures, chemicals, and fumes.

Industrial New Construction and Maintenance Paints. High performance coatings formulated to withstand extremes

of use, such as heavy abrasion, water immersion, chemicals, corrosion, extreme temperatures, and electrical or solvent exposure. Also includes maintenance coatings used to maintain nonresidential structures; building and nonbuilding requirements in such areas as public utilities, railroads, roads and highways; and other industrial plant coatings; the primary purpose of which is protection.

Industrial maintenance paints include the following:

Interior (specially formulated coatings for special conditions in the interior of industrial plants requiring protection against extreme temperatures, fungi, chemicals, fumes, etc.)

Exterior (specially formulated coatings for special conditions in the exterior of industrial plants requiring protection against extreme temperatures, fungi, chemicals, fumes, etc.)

Marine Paints, Including Ship and Offshore. Paints and coatings specifically formulated to withstand water immersion and exposure to marine atmosphere. Exclude spar varnish. Includes marine refinish paints.

Traffic Marking Paints. Paints specifically formulated to withstand wear of vehicular traffic and to be highly visible at night; used to mark center lines on roadways, traffic lanes, crosswalks, etc. Includes paints manufactured with reflective beads.

Refinish Paints. Coatings formulated specifically to meet particular product and application requirements, and sold to the refinishing trade or through retail outlets for aftermarket application.

Other Special Coatings. Include the following:

Metallic paints (aluminum, zinc, bronze, etc.)

Traffic paints (all types, shelf goods and highway departments)

Automotive and machinery refinish primers and undercoaters

Marine paints and enamels (shelf goods)

Aerosol paints made from paint produced and packaged in the same establishments or packaged on contract.

Table 20. **SUMMARY OF ESTIMATED U.S. TOTAL QUANTITY AND VALUE OF SHIPMENTS OF PAINT AND ALLIED PRODUCTS: 1987 TO 1992**

[Quantity in millions of gallons; value in millions of dollars]

Year	Total		Architectural coatings		Product coatings OEM		Special-purpose coatings		Miscellaneous allied paint products	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992.....	1,270.5	13,603.5	562.3	5,164.3	334.0	4,283.1	169.5	2,802.1	204.7	1,354.0
1991.....	1,226.8	13,009.4	537.9	4,900.7	320.4	4,005.4	179.5	2,910.8	189.0	1,192.5
1990.....	1,281.9	12,898.4	558.4	4,913.6	338.6	4,032.6	195.6	2,781.5	189.3	1,170.7
1989.....	1,239.7	12,331.6	537.5	4,525.3	359.9	4,220.1	179.0	2,493.5	163.3	1,092.7
1988.....	1,229.0	11,835.4	535.9	4,426.8	365.7	4,104.5	154.4	2,251.8	173.0	1,052.3
1987.....	1,183.6	11,163.1	527.0	4,245.4	340.2	3,782.5	145.5	2,139.7	170.9	995.5

Note: Figures for 1987 through 1992 are estimates of the total U.S. value of shipments of paint, varnish, and lacquer. These estimates were developed by increasing the product class totals shown in table 21 by adjustment factors. These factors are: 1.00 for "Architectural coatings," 1.04 for "Product coatings OEM," 1.06 for "Special-purpose coatings," and 1.16 for "Miscellaneous allied paint products." For example: the quantity and value of OEM coatings for 1992 shown in table 21 amounted to 321,188 and \$4,118,357, respectively. Adjusting these figures by the factor of 1.04 (multiplying 321,188 and \$4,118,357 by 1.04) equals the adjusted and rounded quantity and value of 334.0 and \$4,283.1 shown above in table 20. These factors are used because the annual survey panel was selected to measure approximately 95 percent of the total shipments in the paint industry (SIC 2851). The adjustment factors (based on the 1987 census relationships) bring each product class value up to 100 percent. Quarterly figures for 1992 and 1991 reflect the adjusted totals in table 20 and are shown in table 22 along with the quarterly figures originally published in Current Industrial Reports quarterly series MQ28F, *Paint, Varnish, and Lacquer*.

Table 21. **QUANTITY AND VALUE OF SHIPMENTS OF PAINT AND ALLIED PRODUCTS: 1992 AND 1991**

[Quantity in thousands of gallons; value in thousands of dollars]

Product code	Product description	1992		1991	
		Quantity	Value	Quantity	Value
2851 —	Paint and allied products ¹	1,219,780	13,093,320	1,178,366	12,526,222
28511	Architectural coatings.....	562,279	5,164,283	537,939	4,900,736
	Exterior solvent type.....	70,390	789,606	72,945	841,876
28511 12	Solvent thinned paints and tinting bases, including barn and roof paints.....	15,645	179,251	17,342	233,371
28511 15	Solvent thinned enamels and tinting bases, including exterior-interior floor enamels.....	13,747	168,955	13,411	162,296
28511 25	Solvent thinned undercoaters and primers.....	8,317	85,816	7,791	80,036
28511 35	Solvent thinned clear finishes and sealers.....	5,360	59,103	5,812	63,399
28511 37	Solvent thinned stains, including shingle and shake.....	15,638	153,596	16,314	158,512
28511 39	Other exterior solvent thinned coatings, including bituminous paints.....	11,683	142,885	12,275	144,262
	Exterior water-type.....	137,956	1,243,141	134,391	1,166,080
28511 41	Water thinned paints and tinting bases, including barn and roof paints.....	101,131	955,209	96,307	869,419
28511 42	Water thinned exterior-interior deck and floor enamels.....	1,300	12,465	845	8,722
28511 44	Water thinned undercoaters and primers.....	6,288	62,711	5,815	57,435
28511 49	Water thinned stains and sealers.....	6,519	53,430	7,237	62,217
28511 55	Other exterior water thinned coatings.....	22,718	159,326	24,187	168,287
	Interior solvent type.....	53,740	632,236	52,585	646,622
28511 63	Flat solvent thinned wall paints and tinting bases, including mill white paints.....	6,678	78,590	6,211	77,802
28511 65	Gloss and quick drying enamels and other gloss solvent thinned paints and enamels.....	3,901	52,893	4,853	63,419
28511 69	Semigloss, eggshell, satin solvent thinned paints, and tinting bases.....	14,236	151,603	14,018	160,590
28511 71	Solvent thinned undercoaters and primers.....	8,262	78,091	7,773	77,056
28511 75	Solvent thinned clear finishes and sealers.....	9,235	132,806	7,919	116,940
28511 77	Solvent thinned stains.....	5,731	75,823	5,537	73,892
28511 79	Other interior solvent thinned coatings.....	5,697	62,430	6,274	76,923

See footnotes at end of table.

Table 21. QUANTITY AND VALUE OF SHIPMENTS OF PAINT AND ALLIED PRODUCTS: 1992 AND 1991—Continued

[Quantity in thousands of gallons; value in thousands of dollars]

Product code	Product description	1992		1991	
		Quantity	Value	Quantity	Value
28511	Paint and allied products--Cont.				
	Architectural coatings--Cont.				
	Interior water-type.	283,032	2,320,522	259,961	2,063,621
28511 81	Flat water thinned paints and tinting bases	140,408	1,037,629	123,841	905,535
28511 83	Semigloss, eggshell, satin, and other water thinned paints and tinting bases	100,945	941,089	97,402	850,604
28511 86	Water thinned undercoaters and primers	17,601	129,220	14,056	103,525
28511 88	Other interior water thinned coatings, stains, and sealers	24,078	212,584	24,662	203,957
28511 93	Architectural lacquers	9,538	79,237	10,571	83,320
28511 00	Architectural coatings, n.s.k.	7,623	99,541	7,486	99,217
28512	Product finishes for original equipment manufacturers (OEM), excluding marine coatings	321,188	4,118,357	308,123	3,851,364
28512 22	Automobile finishes	38,715	895,037	41,590	911,803
28512 23	Truck, bus, and recreational vehicle finishes	13,245	274,366	10,101	207,508
28512 25	Other transportation equipment finishes, including aircraft and railroad	4,806	85,880	4,173	80,244
28512 35	Appliance, heating equipment, and air-conditioner finishes	6,136	90,731	5,210	74,820
28512 37	Wood furniture, cabinet, and fixture finishes	40,016	333,135	35,531	295,817
28512 39	Wood and composition board flat stock finishes	11,660	104,010	8,759	82,308
28512 41	Metal building product finishes, including coatings for aluminum extrusions and siding	22,494	414,814	21,081	378,940
28512 43	Container and closure finishes	62,987	517,280	67,854	538,724
28512 47	Machinery and equipment finishes, including road building equipment and farm implement	14,436	206,803	14,145	185,822
28512 49	Nonwood furniture and fixture finishes, including business equipment finishes	17,821	252,189	17,858	230,602
28512 52	Paper, paper board, film, and foil finishes, excluding pigment binders	12,218	75,768	12,424	84,033
28512 53	Electrical insulating coatings	4,291	68,519	3,249	29,646
28512 55	Powder coatings ²	34,218	337,683	29,370	290,525
28512 67	Other industrial product finishes	20,499	271,528	19,525	276,008
28512 00	Product finishes for original equipment manufacturers (OEM), excluding marine coatings, n.s.k.	17,646	190,614	17,253	184,564
28513	Special-purpose coatings, including all marine coatings. Industrial new construction and maintenance paints (especially formulated coating for special conditions of industrial plants and/or facilities requiring protection against extreme temperatures, fungi, chemicals, fumes, etc.):	159,860	2,643,464	169,367	2,746,074
28513 01	Interior	20,519	234,377	25,552	268,783
28513 05	Exterior	33,467	504,743	32,825	505,312
28513 11	Traffic marking paints (all types, shelf goods, and highway department)	23,874	130,059	22,697	124,866
28513 13	Automotive, other transportation and machinery refinish paints and enamels, including primers	39,747	1,144,903	47,535	1,230,006
28513 15	Marine paints, ship and off-shore facilities, and shelf goods for both new construction and marine refinish and maintenance, excluding spar varnish	15,762	277,613	14,935	266,313
28513 31	Aerosol - Paint concentrates produced for packaging in aerosol containers	19,795	219,365	18,975	223,684
28513 00	Special-purpose coatings n.s.k.	6,696	132,404	6,848	127,110
28515	Miscellaneous allied paint products	176,453	1,167,216	162,937	1,028,048
28515 23	Paint and varnish removers	7,257	63,737	6,540	53,784
28515 31	Thinners for lacquers and other solvent based paint products	40,666	190,516	29,360	126,789
28515 33	Pigment dispersions	25,653	224,249	25,426	216,724
28515 98	Other miscellaneous allied paint products, including brush cleaners, nonpressure wood preservatives, and putty and glazing compounds	77,815	482,448	77,350	431,074
28515 00	Miscellaneous allied paint products n.s.k.	25,062	206,266	24,261	199,677

n.s.k. Not specified by kind. ¹Revised by 5 percent or more from previously published figure.¹Represents total shipments for those establishments producing paint and allied products that have 20 or more employees. These establishments represent approximately 95 percent of the total value of shipments for SIC industry 2851 (paint, varnishes, lacquers, enamels, and allied products) based on relationships observed in the 1987 Census of Manufactures.²Data for powder coatings are collected in pounds and converted to gallons by using a conversion factor of 3 (3 lb = 1 gallon). Data collected in pounds amounted to 102,654 thousand pounds in 1992 and 88,109 thousand pounds in 1991.

Table 22. **QUANTITY AND VALUE OF SHIPMENTS OF PAINT, VARNISH, AND LACQUER, BY QUARTER: 1992 AND 1991**

[Quantity in thousands of gallons; value in thousands of dollars]

Quarter and year	As revised							
	Total		Architectural coatings		Product coatings OEM		Special-purpose coatings	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992								
Total.....	1,065,769	12,249,445	562,280	5,164,282	334,036	4,283,091	169,453	2,802,072
Fourth quarter.....	233,815	2,775,106	115,529	1,058,614	81,934	1,044,504	36,352	671,988
Third quarter.....	289,549	3,254,766	156,969	1,411,485	85,975	1,077,919	46,605	765,362
Second quarter.....	299,912	3,408,037	163,680	1,535,893	87,019	1,115,858	49,213	756,286
First quarter.....	242,493	2,811,536	126,102	1,158,290	79,108	1,044,810	37,283	608,436
1991								
Total.....	1,037,916	11,816,993	537,939	4,900,736	320,448	4,005,418	179,529	2,910,839
Fourth quarter.....	229,864	2,696,232	109,768	985,214	81,779	1,034,372	38,317	676,646
Third quarter.....	289,481	3,248,277	154,604	1,407,448	84,658	1,032,411	50,219	808,418
Second quarter.....	291,878	3,284,050	157,600	1,463,044	83,654	1,032,307	50,624	788,699
First quarter.....	226,693	2,588,434	115,967	1,045,030	70,357	906,328	40,369	637,076
	As published							
1992								
Total.....	1,103,005	12,339,755	562,499	4,987,750	356,276	4,343,043	184,230	3,008,962
Fourth quarter.....	242,485	2,803,155	115,574	1,022,427	87,389	1,059,124	39,522	721,604
Third quarter.....	299,398	3,278,115	157,030	1,363,236	91,699	1,093,007	50,669	821,872
Second quarter.....	310,062	3,426,994	163,744	1,483,391	92,813	1,131,477	53,505	812,126
First quarter.....	251,060	2,831,491	126,151	1,118,696	84,375	1,059,435	40,534	653,360
1991								
Total.....	1,038,758	11,707,325	539,108	4,881,864	321,091	3,976,697	178,559	2,848,764
Fourth quarter.....	230,060	2,670,591	110,007	981,420	81,943	1,026,955	38,110	662,216
Third quarter.....	289,716	3,218,214	154,940	1,402,028	84,828	1,025,008	49,948	791,178
Second quarter.....	292,114	3,254,195	157,942	1,457,410	83,822	1,024,905	50,350	771,880
First quarter.....	226,868	2,564,325	116,219	1,041,006	70,498	899,829	40,151	623,490

See note at end of table 20.

Table 23. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED PAINTS: 1992 AND 1991**

[Quantity in millions of gallons; value in millions of dollars]

Product code	Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Percent exports to manufacturers' production		Imports for consumption ²		Apparent consumption ⁴	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value ³	Quantity	Value
28511 00, 28512 00, 28513 00	Paint, varnish, and lacquer.....1992 1991	1,065.8 1,037.8	12,249.5 11,816.9	(NA) (NA)	518.1 477.2	(NA) (NA)	4.2 4.0	(NA) (NA)	126.9 105.3	(NA) (NA)	11,858.3 11,445.0
28515 23, 31	Paint and varnish remover, including thinners.....1992 1991	55.6 41.6	294.9 209.5	(NA) (NA)	38.5 33.7	(NA) (NA)	13.1 16.1	(NA) (NA)	20.1 16.4	(NA) (NA)	276.5 192.2
28515 98	Other miscellaneous allied paint products.....1992 1991	90.3 89.7	559.6 500.0	(NA) (NA)	99.0 88.6	(NA) (NA)	17.7 17.7	(NA) (NA)	9.0 5.7	(NA) (NA)	469.6 417.1

Note: For comparison of Standard Industrial Classification (SIC)-based product codes with Schedule B export numbers and HTSUSA import numbers, see appendix B.

(NA) Not available. ¹Revised. New Harmonized Code added; see appendix B.

¹Source: Bureau of the Census report EM 545, *U. S. Exports*.

²Source: Bureau of the Census report IM 145, *U. S. Imports for Consumption*.

³This dollar value represents the c.i.f. (cost, insurance, and freight) value at first port of entry in the United States plus U.S. import duties.

⁴"Apparent consumption" is equal to domestic "Shipments," plus "Imports," minus "Exports".

HISTORICAL NOTE

Data on paint, varnish, and lacquer have been collected by the Census Bureau since 1928. Prior to 1981, a monthly sample survey, benchmarked to the Census of Manufactures, was used to collect this data. Beginning with data year 1981, an annual survey on paint and related products was added. The monthly survey was still conducted through 1990. Beginning in 1991, due to budget reductions, the monthly series was canceled and replaced with a similar quarterly.

Historical data may be obtained from the Current Industrial Reports available at your Federal Depository Library. Prior to 1959, the series was titled "Facts for Industry." Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Kim Ciurca, 301-763-5602 or Dave Gromos, 301-763-7809.

4.4 PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS

INTRODUCTION

The data in this subsection are from the survey MA28G, Pharmaceutical Preparations, which covers manufacturers of pharmaceutical preparations, except biologicals. The data include all preparations which can be dispensed in measured portions, to produce the therapeutic effect for which the preparation is most commonly employed (liquids, tablets, pills, capsules, lozenges, powders, ointments, jellies, salves, inhaler tubes, etc.). The survey excludes all uncompounded medicinal chemicals and botanicals.

EXPLANATION OF TERMS

Bulk Domestic Shipments. Represents the value of dosage forms shipped in bulk to other plants of the same company or other companies in large drums or other

bulk-type containers requiring only repackaging. Shipments to hospitals or similar users are excluded from this item description and are reported in the product areas described in the Prescription and Non-Prescription definitions.

Non-Prescription. A drug product which is sold over the counter, whether advertised or otherwise promoted to the professions, or advertised or otherwise promoted to the general public. (Note: Prior to 1984, separate figures were collected for drugs promoted to the professions, "OTC Professional," and drugs promoted to the general public, "Proprietary".)

Prescription Legend. A drug product which by Federal law is available only by prescription by a licensed physician.

Table 24. **VALUE OF PRODUCT CLASS SHIPMENTS OF PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS: 1983 TO 1992**

[In millions of dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
28341 —	Pharmaceutical preparations: Pharmaceutical preparations affecting neoplasms, endocrine system, and metabolic diseases, for human use	3,179.1	2,877.4	2,743.2	2,507.4	2,071.2	1,994.9	2,140.6	2,110.2	1,946.8	1,885.7
28342 —	Pharmaceutical preparations acting on the central nervous system and sense organs, for human use	8,103.0	7,430.8	7,218.5	6,441.3	6,172.7	5,740.5	5,946.0	5,737.6	5,029.7	4,439.0
28343 —	Pharmaceutical preparations acting on the cardiovascular system, for human use	4,877.0	4,810.3	4,814.6	4,874.9	4,449.9	3,795.9	3,570.3	3,170.9	2,708.1	2,264.2
28344 —	Pharmaceutical preparations acting on the respiratory system, for human use	5,023.9	4,259.7	3,724.1	3,286.2	3,224.0	2,811.4	2,492.2	2,202.4	1,816.4	1,750.4
28345 —	Pharmaceutical preparations acting on the digestive or genito-urinary system, for human use	7,049.9	5,624.8	4,840.2	4,363.0	3,860.8	2,954.8	1,864.5	1,875.9	1,765.4	1,611.7
28346 —	Pharmaceutical preparations acting on the skin, for human use	1,687.1	1,578.5	1,558.0	1,451.7	1,388.5	1,288.3	1,327.3	1,213.3	1,132.9	1,037.7
28347 —	Vitamin, nutrient, and hematinic preparations, for human use	2,997.8	2,787.2	2,587.9	2,672.4	2,538.5	2,570.7	2,665.9	2,291.2	2,286.9	2,454.8
28348 —	Pharmaceutical preparations affecting parasitic and infective diseases, for human use	7,059.9	6,006.1	5,411.0	4,936.2	4,593.6	4,024.9	3,821.0	3,386.2	3,046.6	2,820.2
28349 —	Pharmaceutical preparations for veterinary use	1,350.2	1,462.2	1,056.8	1,071.1	1,051.5	997.1	853.7	817.7	843.1	847.2

Table 25. VALUE OF SHIPMENTS OF PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS: 1992 AND 1991
[In thousands of dollars]

Product code	Product description	1992				1991			
		Total	Prescription legend	Non-prescription	Bulk shipments ¹	Total	Prescription legend	Non-prescription	Bulk shipments ¹
2834 —	Pharmaceutical preparations (except biologicals)	41,327,952	31,199,855	9,496,770	631,327	36,836,893	26,898,234	9,369,716	'568,943
28341 —	Pharmaceutical preparations affecting neoplasms, endocrine system, and metabolic diseases, for human use	3,179,088	3,085,517	28,161	65,410	'2,877,351	'2,797,935	26,994	'52,422
	Hormones and synthetic substitutes:								
	Corticoids:								
28341 11	Systemic	173,640	173,640	-	(D)	163,194	(D)	(D)	(D)
28341 15	Local and topical, including anti-infective combinations	334,126	(D)	(D)	-	550,287	523,911	26,376	-
28341 17	Androgens	166,868	166,868	-	(D)	'145,623	(D)	-	(D)
28341 19	Estrogens	4,347	4,347	-	(D)	'5,373	(D)	-	(D)
28341 21	Insulin and antidiabetic agents	(D)	(D)	-	-	76,137	'5,373	-	-
28341 23	ACTH (corticotropin)	(D)	(D)	-	-	'42,434	'42,434	-	(D)
28341 25	Oral contraceptive preparations	(D)	(D)	-	-	(D)	(D)	-	-
28341 27	Progestogens, excluding premenstrual tension preps (see product code 28345 85)	18,457	18,457	-	(D)	(D)	(D)	-	(D)
28341 31	Sex hormone combinations (except progestogen combinations)	(D)	(D)	-	-	(D)	(D)	-	-
28341 35	Thyroid and antithyroid preparations, including iodides	90,195	90,195	-	(D)	13,472	13,472	-	(D)
28341 37	Anabolic agents	87,864	(D)	-	(D)	'112,635	(D)	(D)	(D)
28341 39	Other hormone preparations	(D)	(D)	-	-	'683,210	'683,210	-	-
28341 43	Antineoplastic agents:	894,642	894,642	-	-	(D)	(D)	-	-
28341 45	Radioactive isotopes for internal use	(D)	(D)	-	-	(D)	(D)	-	-
28341 98	Specific antineoplastic agents	(D)	(D)	-	-	(D)	(D)	-	-
	Other pharmaceutical preparations affecting neoplasms, the endocrine system, and metabolic diseases, for human use	429,872	(D)	(D)	(D)	'357,212	(D)	(D)	(D)
28342 —	Pharmaceutical preparations acting on the central nervous system and the sense organs, for human use	8,103,032	6,159,594	1,892,635	50,803	'7,430,823	5,401,920	'1,978,700	'50,203
28342 11	Parasympathomimetic cholinergic drugs	7,622	7,622	-	(D)	10,765	10,765	-	(D)
28342 13	Skeletal muscle relaxants	349,260	(D)	(D)	(D)	'364,117	(D)	(D)	-
	Internal analgesics and antipyretics:								
	Narcotic:								
28342 19	Opium and derivatives	233,336	233,336	-	(D)	216,632	(D)	(D)	(D)
28342 20	Synthetic narcotics	258,715	(D)	(D)	-	'198,510	(D)	(D)	-
	Nonnarcotic:								
	Salicylates:								
28342 22	Aspirin (acetylsalicylic acid)	271,920	(D)	(D)	(D)	257,000	(D)	(D)	(D)
28342 24	Other salicylates, such as sodium salicylate	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
28342 25	Aspirin combinations	328,655	(²)	(²)	(²)	404,522	(²)	(²)	(²)
28342 26	Acetaminophen and combinations	556,003	79,757	476,246	3,303	'552,740	'85,197	467,543	(D)
28342 27	Antiarthritics (nonhormonal)	1,012,244	925,603	86,641	(D)	'921,421	'823,695	97,726	(D)

See footnotes at end of table.

Table 25. VALUE OF SHIPMENTS OF PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS: 1992 AND 1991—Continued
[In thousands of dollars]

Product code	Product description	1992				1991			
		Total	Prescription legend	Non-prescription	Bulk shipments ¹	Total	Prescription legend	Non-prescription	Bulk shipments ¹
2834- —	Pharmaceutical preparations acting on the central nervous system—Cont.								
28342 28	Internal analgesics and antipyretics—Cont.								
	Other internal analgesics and antipyretics, including effervescent types and suppositories ²	399,947	280,582	119,365	988	'384,997	'283,340	'101,657	390
28342 41	Anticonvulsants (except phenobarbital)	344,853	(D)	(D)	(D)	328,265	(D)	(D)	(D)
28342 51	Psychotherapeutic agents:								
	Antidepressants	1,299,243	1,299,243	-	-	1,199,165	(D)	(D)	(D)
	Tranquilizers:								
28342 55	Phenothiazine derivatives	251,992	251,992	-	(D)	271,963	271,963	-	(D)
28342 57	Other tranquilizers	339,446	339,446	-	(D)	299,600	299,600	-	(D)
28342 59	Other psychotherapeutic agents	58,685	58,685	-	(D)	'65,478	'65,478	-	(D)
	Central nervous system stimulants (respiratory and cerebral stimulants, including sympathomimetic agents employed mainly as CNS stimulants); excluding nondrug dietaries for weight control:								
28342 61	Amphetamines	(D)	(D)	-	-	12,048	12,048	-	(D)
28342 63	Anorexants, (except amphetamines)	47,382	46,223	1,159	(D)	'59,713	(D)	(D)	(D)
28342 69	Other CNS stimulants	(D)	(D)	(D)	(D)	50,906	(D)	(D)	(D)
	Sedatives and hypnotics:								
	Prescription:								
28342 71	Barbiturates	27,788	27,788	(X)	(D)	'23,132	'23,132	(X)	(D)
28342 75	Non-barbiturates	83,807	83,807	(X)	(D)	'71,097	'71,097	(X)	(D)
	Non-prescription:								
28342 77	Sleep inducers	45,017	(X)	45,017	(D)	'65,088	(X)	'65,088	(D)
28342 79	Calming agents	(D)	(X)	(D)	-	(D)	(X)	(D)	-
	Anesthetics, (except urinary tract anesthetics) and skin preparations used as antipruritics:								
28342 81	Local and topical	206,432	(D)	(D)	-	195,037	189,055	'5,982	-
28342 85	General	144,544	(D)	(D)	(D)	108,902	102,587	6,315	(D)
	Eye and ear preparations, excluding anti-infectives, corticoids, and antibacterials and antiseptics:								
28342 91	Mydriatics and miotics	193,213	(D)	(D)	-	192,056	(D)	(D)	-
28342 93	Contact lens solutions	440,925	6,314	434,611	-	(D)	(D)	'393,351	-
28342 94	Other eye and ear preparations	187,012	73,666	113,346	(D)	139,149	'14,254	'124,895	(D)
28342 98	Other pharmaceutical preparations acting on the central nervous system and the sense organs, for human use	550,217	(D)	(D)	(D)	'590,937	'548,486	42,451	'911
28343 —	Pharmaceutical preparations acting on the cardiovascular system, for human use	4,876,967	4,745,664	4,844	126,459	4,810,270	4,673,442	'10,634	'126,194
28343 11	Anticoagulants	271,709	(D)	(D)	(D)	'365,699	'365,699	-	(D)
28343 21	Hemostatics	60,269	(D)	(D)	-	57,505	(D)	(D)	-
28343 31	Digitalis preparations	(D)	(D)	-	(D)	(D)	(D)	-	(D)

See footnotes at end of table.

Table 25. VALUE OF SHIPMENTS OF PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS: 1992 AND 1991—Continued
[In thousands of dollars]

Product code	Product description	1992				1991			
		Total	Prescription legend	Non-prescription	Bulk shipments ¹	Total	Prescription legend	Non-prescription	Bulk shipments ¹
2843 —	Pharmaceutical preparations acting on the cardiovascular system—Cont.								
	Hypotensives:								
28343 43	Rauwolfia-alkaloid preparations	37,765	(D)	(D)	-	38,080	(D)		-
28343 47	Beta receptor blocking agents	148,307	148,307	-	(D)	'275,150	'275,150	(D)	-
28343 48	Other hypotensives	493,831	493,831	-	(D)	451,631	451,631	-	(D)
	Vasodilators:								
28343 51	Coronary	229,580	229,580	-	(D)	198,162	198,162	-	'5,093
28343 55	Peripheral	(D)	(D)	-	(D)	22,843	22,843	-	(D)
28343 61	Anti-arrhythmics, such as propanolol and quinidine	174,518	174,518	-	(D)	191,748	191,748	-	(D)
28343 71	Calcium channel blockers, such as isoptin, calan, procardia, cardizem, and adalat	1,049,086	1,049,086	-	(D)	987,080	987,080	-	(D)
28343 81	Ace inhibitors, such as vasotec, capoten, prinvil, and zestril	(D)	(D)	-	(D)	(D)	(D)	-	(D)
28343 97	Other pharmaceutical preparations acting on the cardiovascular system, including vasopressors, and antihypertensive agents, for human use	620,968	(D)	(D)	12,303	662,778	(D)	(D)	10,479
28344 —	Pharmaceutical preparations acting on the respiratory system, for human use	5,023,919	2,858,935	2,140,856	24,128	'4,259,738	'2,289,910	1,946,762	'23,066
28344 11	Antihistamines (except cold preparations and antiemetics)	1,088,389	986,920	101,469	(D)	'848,619	'787,972	60,647	'327
28344 15	Bronchial dilators, including antiasthmatics	771,175	714,890	56,285	159	'261,986	'204,193	57,793	3,146
	Cough and cold preparations (prescription):								
	Cough preparations and expectorants (containing antitussive or other ingredients intended primarily to treat cough only):								
28344 21	Narcotic	87,659	87,659	(X)	(D)	'123,422	'123,422	(X)	(D)
28344 25	Nonnarcotic	37,866	37,866	(X)	(D)	30,315	30,315	(X)	(D)
	Cold preparations (containing combinations of the following ingredients: (but not antitussive): nasal decongestant, antihistamine, analgesic, bioflavonoid, or antibiotic:								
28344 31	Nasal decongestants	40,571	40,571	(X)	(D)	'155,094	'155,094	(X)	(D)
28344 35	Antihistamine cold preparations	6,740	6,740	(X)	(D)	55,441	55,441	(X)	(D)
28344 39	Other prescription cold preparations	43,767	43,767	(X)	(D)	10,200	10,200	(X)	(D)
28344 41	Cough and cold combinations (prescription)	59,301	59,301	(X)	726	133,083	133,083	(X)	(D)
	Cough and cold preparations (nonprescription):								
	Decongestants:								
28344 51	Nasal sprays	129,111	(X)	129,111	(D)	204,215	(X)	204,215	-
28344 55	Nose drops	(D)	(X)	(D)	-	(D)	(X)	(D)	-
28344 59	Other decongestants	319,738	(X)	319,738	(D)	341,764	(X)	341,764	(D)

See footnotes at end of table.

Table 25. VALUE OF SHIPMENTS OF PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS: 1992 AND 1991—Continued
 [In thousands of dollars]

Product code	Product description	1992				1991			
		Total	Prescription legend	Non-prescription	Bulk shipments ¹	Total	Prescription legend	Non-prescription	Bulk shipments ¹
28344 —	Pharmaceutical preparations acting on the respiratory system—Cont.								
	Cough and cold preparations (nonprescription):—Cont.								
28344 61	Cough syrups	497,819	(X)	497,819	-	365,249	(X)	365,249	(D)
28344 63	Capsules and tablets	421,161	(X)	421,161	10,728	'462,389	(X)	'462,389	(D)
28344 65	Lozenges	(D)	(X)	(D)	(D)	(D)	(X)	(D)	(D)
28344 67	Topical preparations	(D)	(X)	(D)	-	(D)	(X)	(D)	-
28344 71	Cough drops	112,005	(X)	112,005	-	90,601	(X)	90,601	-
28344 79	Other nonprescription cough and cold preparations	211,943	(X)	211,943	(D)	224,651	(X)	224,651	(D)
28344 81	Beta agonists such as proventil and ventolin	830,403	(D)	(D)	(D)	'746,664	(D)	(D)	-
28344 98	Other pharmaceutical preparations acting on the respiratory system, for human use	284,079	(D)	(D)	(D)	'130,404	(D)	(D)	(D)
28345 —	Pharmaceutical preparations acting on the digestive or the genito-urinary systems, for human use	7,049,948	5,612,403	1,412,454	25,091	5,624,780	4,128,196	'1,471,650	24,934
28345 11	Digestive system preparations:								
28345 15	Enzymes	52,135	34,658	17,477	(D)	50,536	31,956	18,580	(D)
	Antacids, including acid neutralizing products with coating functions, but excluding effervescent salicylate								
28345 19	Antidiarrheals	438,671	(D)	(D)	359	'448,805	(D)	(D)	(D)
	Laxatives:	297,302	32,992	264,310	(D)	272,368	4,825	267,543	(D)
28345 21	Irritants	85,325	(D)	(D)	(D)	'98,318	(D)	(D)	'725
28345 23	Bulk producing	191,920	(D)	(D)	(D)	197,408	(D)	(D)	(D)
28345 25	Fecal softeners	123,696	(D)	(D)	6,805	'110,333	(D)	(D)	6,384
28345 27	Emollients	32,499	(D)	(D)	-	51,274	(D)	(D)	-
28345 28	Saline	7,808	(D)	(D)	-	9,682	(D)	(D)	-
28345 29	Enema specialties	34,978	(D)	(D)	(D)	35,854	(D)	(D)	(D)
28345 31	Digestants	(D)	(D)	(D)	-	(D)	(D)	(D)	-
28345 33	Bile therapy preparations, including bile products, choleretics, and cholagogues	(D)	(D)	(D)	(D)	4,728	(D)	(D)	(D)
28345 35	Antinauseants and motion sickness remedies (anti-emetics), including antihistaminic antiemetic preparations	(D)	(D)	(D)	(D)	62,684	53,246	'9,438	(D)
28345 37	Lipotropics and cholesterol reducers	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
28345 39	Diet aids containing local anesthetics such as benzocaine	(D)	-	(D)	(D)	(D)	-	(D)	(D)
	Antispasmodics and anticholinergics:								
28345 41	Synthetics	19,088	19,088	-	-	27,266	27,266	-	-
28345 43	Ataractic combinations	1,286	1,286	-	-	1,299	1,299	-	-
28345 45	Belladonna and derivatives	41,330	(D)	(D)	(D)	33,534	(D)	(D)	(D)
28345 47	H ₂ blocking agents such as zantac, tagamet, carafate, and pepcid	2,717,399	2,717,399	-	-	'2,297,896	'2,297,896	-	-
28345 49	Other antispasmodics and anticholinergics	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
28345 58	Other digestive system preparations, including emetics	35,594	30,388	5,206	(D)	'41,860	'39,442	2,418	(D)

See footnotes at end of table.

Table 25. VALUE OF SHIPMENTS OF PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS: 1992 AND 1991—Continued
[In thousands of dollars]

Product code	Product description	1992				1991			
		Total	Prescription legend	Non-prescription	Bulk shipments ¹	Total	Prescription legend	Non-prescription	Bulk shipments ¹
28345 —	Pharmaceutical preparations acting on the digestive or the genito-urinary systems—Cont.								
28345 61	Genito-urinary preparations:	16,237	(D)	(D)	(D)	15,865	(D)	(D)	(D)
	Urinary antibacterials and antiseptics								
	Diuretics, excluding aminophylline, xanthine, and rauwolfia-diuretic combinations (see cardiovascular preparations):								
28345 71	Thiazides and related agents	124,630	(D)	(D)	-	'147,743	'147,743	-	-
28345 73	Other diuretics	205,114	(D)	(D)	(D)	'174,583	(D)	(D)	(D)
28345 81	Oxytocics	14,789	14,789	-	-	14,203	14,203	-	(D)
28345 83	Contraceptive agents (except oral contraceptives (aerosols, jels, sponges, and creams)	(D)	(D)	(D)	-	46,986	(D)	(D)	-
28345 85	Premenstrual tension preparations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
28345 87	Vaginal cleaners	116,793	1,831	114,962	(D)	'106,199	(D)	(D)	-
28345 98	Other pharmaceutical preparations acting on the genito-urinary system, including urinary tract anesthetics, for human use	118,934	84,449	34,485	(D)	'53,688	(D)	(D)	(D)
28346 —	Pharmaceutical preparations acting on the skin, for human use	1,687,078	546,362	1,130,034	10,682	1,578,506	506,224	1,035,234	37,048
	Dermatological preparations:								
	Emollients and protectives, including burn remedies and ointment bases	395,685	151,404	244,281	(D)	347,379	163,532	183,847	(D)
28346 13	Antipruritics and local anesthetic skin preparations	156,591	23,578	133,013	-	154,894	20,173	134,721	-
28346 15	Coal tar, sulfur, and resorcinol preparations	8,913	(D)	(D)	(D)	'8,754	798	'7,956	(D)
28346 16	Antiacne preparations	174,368	68,952	105,416	(D)	158,973	'49,811	109,162	(D)
28346 18	Antidandruff and antiseborrheic preparations (except dandruff shampoos)	(D)	(D)	2,308	-	(D)	(D)	2,319	-
28346 19	Other dermatological preparations	167,180	104,045	63,135	(D)	120,440	'73,379	'47,061	(D)
28346 21	Hemorrhoidal preparations	(D)	-	(D)	-	(D)	(D)	(D)	-
	External analgesics and counterirritants: Ointments, jellies, pastes, creams, cerates, and salves	216,215	(D)	(D)	(D)	232,913	(D)	(D)	(D)
28346 35	Liquid, excluding rubbing alcohol, but including liniments	41,117	-	41,117	(D)	43,870	-	43,870	(D)
28346 37	Rubbing alcohol	73,799	-	73,799	-	64,143	-	64,143	-
28346 39	Other external analgesics and counterirritants	70,617	(D)	(D)	(D)	61,364	(D)	(D)	-
28346 98	Other pharmaceutical preparations acting on the skin, for human use	251,664	(D)	(D)	(D)	217,792	'131,113	'86,679	(D)
28347 —	Vitamin, nutrient, and hematonic preparations, for human use	2,997,808	1,355,331	1,445,392	197,085	'2,787,160	'1,283,744	'1,346,284	'157,132
	Vitamins:								
	Multivitamins, plain and with minerals, (except B complex vitamins and fish liver oils)	780,305	24,841	755,464	41,189	'719,363	29,476	'689,887	'46,534

See footnotes at end of table.

Table 25. VALUE OF SHIPMENTS OF PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS: 1992 AND 1991—Continued
[In thousands of dollars]

Product code	Product description	1992				1991			
		Total	Prescription legend	Non-prescription	Bulk shipments ¹	Total	Prescription legend	Non-prescription	Bulk shipments ¹
28347 —	Vitamin, nutrient, and hematonic preparations—Cont.								
28347 13	Vitamins—Cont.								
28347 14	Pediatric vitamin preparations (drops, suspensions, and chewable tablets)	82,249	3,066	79,183	1,001	'88,354	3,043	'85,311	'1,832
28347 15	Prenatal vitamin preparations	55,140	49,702	5,438	(D)	41,299	37,283	4,016	(D)
28347 16	B complex preparations	118,739	29,445	89,294	6,036	'102,039	18,062	'83,977	'7,457
28347 17	Fluoride preparations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
28347 19	All other vitamin preparations	264,942	3,422	261,520	65,406	244,203	'5,349	238,854	51,062
28347 21	Fish liver oils (cod, etc.)	15,004	-	15,004	3,803	'13,527	-	'13,527	3,016
28347 31	Nutrients, excluding therapeutic dietary foods and infant formulas	160,291	44,304	115,987	19,883	149,001	71,940	77,061	'16,828
28347 41	Tonics and alteratives	15,876	(D)	(D)	(D)	14,990	(D)	(D)	(D)
28347 51	Hematinics:								
28347 51	With B ₁₂ :								
28347 53	Oral	22,514	11,992	10,522	(D)	'18,441	10,663	'7,778	(D)
28347 55	Parenteral	(D)	(D)	-	-	2,937	2,937	-	(D)
28347 57	Other hematinics:								
28347 61	Oral	30,104	(D)	(D)	264	57,222	(D)	(D)	(D)
	Parenteral	(D)	(D)	(D)	-	(D)	1,023	(D)	-
28347 98	Hospital solutions, including dextran, etc., but excluding biologicals such as blood plasma	1,069,803	(D)	(D)	(D)	'942,857	(D)	(D)	-
28348 —	Other vitamin, nutrient, and hematonic preparations, for human use	157,848	89,897	67,951	38,466	204,772	133,529	71,243	(D)
	Pharmaceutical preparations affecting parasitic and infective diseases, for human use	7,059,919	6,205,281	780,847	73,791	6,006,088	'5,124,443	833,036	48,609
28348 11	Anti-infective agents, excluding corticoid-anti-infective combinations (see product code 28341 15):								
28348 15	Amebicides and trichomonocides	112,391	(D)	(D)	-	'92,585	(D)	(D)	-
	Anthelmintics	(D)	(D)	(D)	-	(D)	(D)	(D)	-
	Systemic antibiotic preparations:								
28348 20	Broad and medium spectrum (single or in combinations with other antibiotics):								
28348 22	Tetracyclines, including chlortetracycline and congeners	161,555	161,555	-	-	186,982	186,982	-	-
28348 24	Cephalosporins, such as cefamandole nate and cephalixin	2,202,079	2,202,079	-	(D)	'2,047,266	'2,047,266	-	(D)
	Erythromycins, such as erythromycin ethylsuccinate and erythromycin stearate	170,627	170,627	-	(D)	151,208	151,208	-	(D)
	Penicillins (single):								
28348 26	Semisynthetic penicillins, such as amoxicillins and ampicillin:								
28348 28	Injectable	31,401	31,401	-	-	'74,606	'74,606	-	-
	Other forms	1,309,554	1,309,554	-	(D)	'854,524	'854,524	-	(D)

See footnotes at end of table.

Table 25. VALUE OF SHIPMENTS OF PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS: 1992 AND 1991—Continued
[In thousands of dollars]

Product code	Product description	1992			1991			
		Total	Prescription legend	Non-prescription	Bulk shipments ¹	Total	Prescription legend	Non-prescription	Bulk shipments^{1}
28348 —	Pharmaceutical preparations affecting parasitic and infective diseases —Cont. Anti-infective agents, excluding corticoid-anti-infective combinations (see product code 28341 15):—Cont. Systemic antibiotic preparations: Broad and medium spectrum (single or in combinations with other antibiotics):—Cont. Penicillins (single):—Cont. Other penicillins (except semisynthetic), such as penicillin V and penicillin G: Injectable..... Other forms..... Other broad and medium spectrum antibiotics (except sulfa-antibiotic combinations)..... Antibiotics in combination with sulfonamides..... Other systemic antibiotic preparations, including narrow-spectrum antibiotics and streptomycins..... Topical antibiotic preparations..... Tuberculostatic agents: Isoniazid (isonicotinic acid hydrazide) preparations..... Other antituberculars..... Antimalarials (plasmodicides)..... Sulfonamides (except antibiotic)—sulfonamide combinations..... Antifungal preparations..... Antivirals, systemic, such as zovirax, and retrovir..... Other anti-infective agents..... Antibacterials and antiseptics: General..... Mouth and throat preparations..... Other pharmaceutical preparations affecting parasitic and infective diseases, for human use..... Pharmaceutical preparations for veterinary use..... Anesthetics..... Anthelmintics..... Antibiotics: Tetracyclines..... Penicillins..... Other antibiotics.....	(D) 17,207 808,345 (D) 158,474 140,047 3,343 (D) 4,921 87,291 410,761 (D) 105,781 44,321 394,245 45,830 1,350,193 (D) 107,212 180,441 118,144 234,177	(D) 17,207 (D) (D) 158,474 (D) 3,343 (D) (D) 87,291 (D) (D) (D) (D) (D) 12,298 630,768 (D) 59,411 (D) (D) 630,768 (D) 179,424	- - (D) - - (D) - - (D) - - - (D) - 33,532 661,547 (D) 47,801 (D) (D) (D) (D) (D) - 4,178 (D) (D) (D) (D) 54,753	(D) 18,389 726,822 14,764 103,634 129,141 2,924 49,399 7,414 115,166 399,795 (D) 153,031 49,219 325,452 48,299 1,462,177 (D) 113,286 160,464 108,008 281,042	(D) 18,389 (D) 14,764 103,634 (D) 2,924 49,399 (D) (D) 104,356 (D) (D) (D) (D) (D) (D) 12,827 692,420 3,514 65,349 (D) 90,499 213,734	- - (D) - - (D) - - (D) 295,439 - (D) - - (D) - 35,472 720,422 (D) 47,937 (D) 17,509 67,308	- - 3,868 - - - - - - - - (D) - - (D) - 49,335 - 2,992 (D) (D) (D) (D)

See footnotes at end of table.

Table 25. VALUE OF SHIPMENTS OF PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS: 1992 AND 1991—Continued
[In thousands of dollars]

Product code	Product description	1992				1991			
		Total	Prescription legend	Non-prescription	Bulk shipments ¹	Total	Prescription legend	Non-prescription	Bulk shipments ¹
28349 —	Pharmaceutical preparations for veterinary use—Cont.								
28349 27	Antiseptics, wound dressings, and fungicides ..	73,340	(D)	(D)	(D)	65,409	(D)	(D)	(D)
28349 31	Hematinics ³	4,171	(D)	4,171	(D)	2,822	226	2,596	(D)
28349 33	Hemostatics	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)
28349 34	Hormones:								
28349 36	Insulin preparations	—	—	—	—	—	—	—	—
28349 38	ACTH (corticotropin) preparations	5,831	(D)	(D)	(D)	(D)	(D)	(D)	(D)
28349 39	Other hormone preparations	76,885	(D)	(D)	(D)	65,094	(D)	(D)	(D)
	Intravenous solutions and electrolytes	8,944	(D)	(D)	(D)	8,072	(D)	(D)	(D)
28349 41	Nitrofurans	(D)	(D)	(D)	(D)	11,049	(D)	11,049	(D)
28349 43	Nutrients and tonics	23,926	(D)	(D)	2,660	21,957	(D)	(D)	12,673
28349 45	Parasiticides, external	129,263	(D)	(D)	(D)	115,814	(D)	(D)	(D)
28349 47	Sulfonamides	29,607	(D)	(D)	(D)	42,363	(D)	(D)	(D)
28349 51	Tranquilizers and ataractics	7,093	(D)	(D)	(D)	5,222	(D)	(D)	(D)
28349 55	Vitamins and minerals	168,070	(D)	(D)	(D)	'181,839	29,830	'152,009	(D)
28349 98	Other pharmaceutical preparations for veterinary use	101,623	62,749	38,874	(D)	'150,049	'120,721	29,328	(D)

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. 'Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹Data for "Bulk shipments" are excluded from all horizontal seven-digit product detail totals; however, these data are included in all five-digit product class and four-digit industry level totals. Since bulk shipments are typically reported by a small number of producers, and often must be suppressed, inclusion of bulk shipments in all horizontal totals would require the suppression of additional detail.

²Product code 28242 24 combined with product code 28342 28.

³Product code 28349 33 combined with product code 28349 31.

Table 26. DOMESTIC VALUE OF SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF PHARMACEUTICAL PREPARATIONS, EXCEPT BIOLOGICALS: 1991 AND 1992

[Thousand of dollars]

Product code	Product description	Manu- facturers' shipments (value f.o.b. plant)	Exports of domestic merchan- dise ¹	Percent exports to manu- facturers' shipments	Imports for consump- tion ² (value)	Apparent consump- tion ³ (value)	Percent imports to apparent consumption
1992							
	Pharmaceutical preparations	41,327,952	1,179,131	2.9	1,099,187	41,247,988	2.7
28341 —	Pharmaceutical preparations affecting neoplasms, endo- crine system, and metabolic diseases, for human use	3,179,088	209,269	6.6	274,529	3,244,348	8.5
28342 —	Pharmaceutical preparations acting on the central nervous system and sense organs, for human use	8,103,032	92,811	1.1	131,444	8,141,665	1.6
28343 —	Pharmaceutical preparations acting on the cardiovascular system, for human use	4,876,987	137,112	2.8	174,020	4,913,875	3.5
28344 —	Pharmaceutical preparations acting on the respiratory system, for human use	5,023,919	112,307	2.2	180,895	5,092,507	3.6
28345 —	Pharmaceutical preparations acting on the digestive or genito-urinary system, for human use	7,049,948	111,032	1.6	47,896	6,986,812	0.7
28346 —	Pharmaceutical preparations acting on the skin, for human use	1,687,078	23,487	1.4	41,716	1,705,307	2.4
28347 —	Vitamin, nutrient, and hematinic preparations, for human use	2,997,808	108,877	3.6	10,967	2,899,898	0.4
28348 —	Pharmaceutical preparations affecting parasitic and infective diseases, for human use	7,059,919	326,138	4.6	197,711	6,931,492	2.9
28349 —	Pharmaceutical preparations for veterinary use	1,350,193	58,098	4.3	39,989	1,332,084	3.0
1991							
	Pharmaceutical preparations	36,836,893	1,148,451	3.1	1,370,107	37,058,549	3.7
28341 —	Pharmaceutical preparations affecting neoplasms, endo- crine system, and metabolic diseases, for human use	2,877,351	149,845	5.2	214,701	2,942,207	7.3
28342 —	Pharmaceutical preparations acting on the central nervous system and sense organs, for human use	7,430,823	78,149	1.1	155,354	7,508,028	2.1
28343 —	Pharmaceutical preparations acting on the cardiovascular system, for human use	4,810,270	102,161	2.1	186,286	4,894,395	3.8
28344 —	Pharmaceutical preparations acting on the respiratory system, for human use	4,259,738	80,576	1.9	171,661	4,350,823	3.9
28345 —	Pharmaceutical preparations acting on the digestive or genito-urinary system, for human use	5,624,780	80,344	1.4	48,057	5,592,493	0.9
28346 —	Pharmaceutical preparations acting on the skin, for human use	1,578,506	27,759	1.8	15,823	1,566,570	1.0
28347 —	Vitamin, nutrient, and hematinic preparations, for human use	2,787,160	154,219	5.5	8,423	2,641,364	0.3
28348 —	Pharmaceutical preparations affecting parasitic and infective diseases, for human use	6,006,088	422,154	7.0	539,122	6,123,056	8.8
28349 —	Pharmaceutical preparations for veterinary use	1,462,177	53,244	3.6	30,680	1,439,613	2.1

Note: For comparison of Standard Industrial Classification (SIC)-Based product codes with Schedule B export numbers and HTSUSA import numbers, see appendix B.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.³"Apparent consumption" represents new domestic supply and is derived by subtracting "Exports" from the total of "Manufacturers' shipments" plus "Imports."

HISTORICAL NOTES

Data on pharmaceutical preparations, except biologicals, have been collected by the Bureau of the Census since 1962. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact
Walter R. Hunter, Jr., 301-763-4490.

Chapter 5. Glass Products

5.1 FLAT GLASS

INTRODUCTION

The data in this section are from a survey of all companies engaged in the manufacturing of flat or float glass, except laminated or otherwise fabricated flat glass products, as collected on the quarterly report MQ32A, Flat Glass. The survey panel includes all known manufacturers of flat glass, approximately 6 companies. Prior to 1975, the panel included approximately 10 companies.

SUMMARY OF FINDINGS

Flat glass production increased 8.8 percent to 4.7 billion square feet in 1992 from 4.3 billion square feet in 1991. The quantity of flat glass shipments increased 6.3 percent to 4.6 billion square feet in 1992 from 4.3 billion square feet in 1991. Also, the value of flat glass shipments increased 8.3 percent to \$1.5 billion in 1992 from \$1.4 billion in 1991.

By type, sheet plate and float glass up to .107 inch accounted for approximately 45 percent of the total production and total quantity of shipments in 1992 and 1991. By color, clear glass accounted for approximately 61 percent of total production and 63 percent of total quantity of shipments in 1992, compared with 63 percent of total production and 62 percent of total quantity of shipments in 1991.

In 1992, outside customer sales accounted for 64.8 percent of total production, 68.2 percent of total quantity of shipments, and 72.2 percent of total value of shipments. This compares with 68.4 percent of total production, 68.6 percent of total quantity of shipments, and 71.2 percent of total value of shipments in 1991.

EXPLANATION OF TERMS

Unit of Measure. Quantities of glass by thickness, by color designation, and outside customer sales are reported in short tons and thousands of square feet. Total value of

shipments is reported in thousands of dollars. Tonnage is based on a conversion of actual square feet at 0.01294 pound/square foot/mill of thickness for thickness category.

Production. Includes flat glass packed direct from the production line for shipments to customers, finished glass transferred to other establishments of the producing company or added to finished inventory, and consumption within the same plant. Glass blanks are included in production when they are cut and packed for shipments or put into finished inventory. Blanks transferred to another raw glass producing plant of the same company are reported by the receiving plant when cut and packed for shipment or added to finished inventory.

Quantities Produced and Consumed. Includes quantities of each type of glass produced by each company for internal consumption within each company (i.e., the quantity of interplant transfers and the quantity produced and consumed within that same producing plant).

Stocks. Includes total quantity of ending finished stock inventory, excluding glass blanks.

Sheet Glass. Flat glass made by continuous drawing.

Plate Glass. Flat glass formed by a rolling process, ground and polished on both sides, with surfaces essentially plane and parallel.

Float Glass. Flat glass, identical in appearance to plate glass, but formed by a process in which thickness is controlled by floating the glass on a molten bed of tin.

Sales to Outside Customers. Sales outside the reporting company to nonraw glass producing companies.

Table 1. SUMMARY OF FLAT GLASS PRODUCTION, SHIPMENTS, AND INVENTORIES: 1990 TO 1992

Year and quarter	Production		Total shipments			Quantity produced and consumed within each company (1,000 sq. ft.)	Inventory (end of quarter) (1,000 sq. ft.)	Producer Price Index (1982=100.0)
	Total (short tons)	Total (1,000 sq. ft.)	Quantity (includes produced and consumed within each company) (1,000 sq. ft.)	Value in current dollars (\$1,000)	Value in constant dollars ¹ (\$1,000)			
1992								
Total.....	3,892,472	4,661,286	4,600,376	1,462,943	1,552,088	1,174,141	(X)	(X)
Fourth quarter.....	947,047	1,137,462	1,122,612	352,377	361,412	270,733	768,116	97.5
Third quarter.....	985,613	1,202,895	1,226,707	374,278	389,062	299,320	753,266	96.2
Second quarter.....	1,024,538	1,226,823	1,184,518	374,276	407,264	326,141	777,078	91.9
First quarter.....	935,274	1,094,106	1,066,539	362,012	394,349	277,947	734,773	91.8
1991								
Total.....	3,648,386	4,284,202	4,327,428	1,350,658	1,427,233	1,115,786	(X)	(X)
Fourth quarter.....	1,019,034	1,185,286	1,092,875	340,555	351,088	261,772	707,206	97
Third quarter.....	975,429	1,142,327	1,192,941	377,932	408,134	321,047	614,795	92.6
Second quarter.....	854,602	1,016,274	1,111,752	334,481	354,323	297,433	665,409	94.4
First quarter.....	799,321	940,315	929,860	297,690	313,688	235,534	760,887	94.9
1990								
Total.....	4,080,840	4,737,061	4,658,671	1,471,447	1,485,909	1,249,383	(X)	(X)
Fourth quarter.....	1,027,716	1,186,954	1,068,521	342,085	353,759	284,353	756,765	96.7
Third quarter.....	1,073,388	1,249,860	1,230,130	380,773	384,231	334,641	638,332	99.1
Second quarter.....	1,009,648	1,167,115	1,217,929	382,523	383,674	324,031	618,603	99.7
First quarter.....	970,088	1,133,132	1,142,091	366,066	364,245	306,358	669,417	100.5

(X) Not applicable.

¹Adjustments for price changes were made to the data using the producer price index for flat glass as published by the Bureau of Labor Statistics (BLS).

Table 2. SUMMARY OF PRODUCTION, SHIPMENTS, AND INVENTORIES OF FLAT GLASS: 1992

Product code	Product description	Number of companies	Total production (short tons)	Total production (1,000 sq. ft.)	Total shipments		Quantity produced and consumed within each company (1,000 sq. ft.)	Inventory, end of quarter ¹ (1,000 sq. ft.)
					Quantity (includes produced and consumed within each company) (1,000 sq. ft.)	Value (current dollars) (\$1,000)		
32110 00	Flat glass	(X)	3,692,472	4,661,288	4,600,378	1,462,943	1,174,141	(X)
	Fourth quarter.....	5	947,047	1,137,462	1,122,612	352,377	270,733	768,116
	Third quarter.....	5	985,813	1,202,895	1,228,707	374,278	299,320	753,296
	Second quarter.....	5	1,024,538	1,226,823	1,184,518	374,278	328,141	777,078
	First quarter.....	5	935,274	1,094,106	1,066,539	362,012	277,947	734,773
32115 12	By type:							
	Sheet, plate, and float glass up to .107 inch.....	(X)	1,187,684	2,084,062	2,056,997	(X)	485,880	(X)
	Fourth quarter.....	5	268,506	484,503	497,688	(X)	112,093	319,397
	Third quarter.....	5	336,097	588,911	558,586	(X)	119,639	332,582
	Second quarter.....	5	303,205	528,223	524,780	(X)	133,367	302,257
	First quarter.....	5	279,876	482,425	475,943	(X)	120,781	298,814
32115 13	.108 inch through .134 inch.....	(X)	934,681	1,131,688	1,161,257	(X)	292,468	(X)
	Fourth quarter.....	5	230,372	289,123	284,314	(X)	64,822	162,557
	Third quarter.....	5	235,069	279,437	311,544	(X)	79,291	157,748
	Second quarter.....	5	256,184	305,441	302,161	(X)	80,223	189,855
	First quarter.....	5	213,036	257,687	263,238	(X)	68,132	186,575
32115 14	.135 inch through .199 inch.....	(X)	966,456	914,797	870,891	(X)	352,840	(X)
	Fourth quarter.....	5	238,769	218,101	204,101	(X)	81,607	178,556
	Third quarter.....	5	241,785	222,388	226,257	(X)	90,620	164,556
	Second quarter.....	5	250,390	235,746	230,428	(X)	100,223	168,425
	First quarter.....	5	255,512	238,560	210,105	(X)	80,390	163,105
32115 15	.200 inch and thicker.....	(X)	783,651	530,739	511,231	(X)	42,953	(X)
	Fourth quarter.....	5	209,400	145,735	136,509	(X)	12,211	107,606
	Third quarter.....	5	172,642	112,159	130,320	(X)	9,770	98,380
	Second quarter.....	5	214,759	157,411	127,149	(X)	12,328	116,541
	First quarter.....	5	186,850	115,434	117,253	(X)	8,644	86,279
32110 14	By color:							
	Pyrolytically coated.....	(X)	189,883	211,116	198,266	(X)	53,934	55,862
	Fourth quarter.....	4	(X)	(X)	52,163	(X)	14,123	(X)
	Third quarter.....	4	(X)	(X)	53,613	(X)	13,671	(X)
	Second quarter.....	4	(X)	(X)	52,905	(X)	14,902	(X)
	First quarter.....	4	(X)	(X)	39,585	(X)	11,238	(X)
32110 15	Nonpyrolytically coated:							
	Clear.....	(X)	2,428,418	2,866,421	2,918,805	(X)	329,125	421,464
	Fourth quarter.....	5	(X)	(X)	715,942	(X)	76,350	(X)
	Third quarter.....	5	(X)	(X)	797,352	(X)	93,142	(X)
	Second quarter.....	5	(X)	(X)	747,370	(X)	93,929	(X)
	First quarter.....	5	(X)	(X)	658,141	(X)	65,704	(X)
32110 16	Green.....	(X)	935,756	1,236,201	1,165,604	(X)	704,365	174,626
	Fourth quarter.....	4	(X)	(X)	268,104	(X)	153,677	(X)
	Third quarter.....	4	(X)	(X)	290,132	(X)	168,236	(X)
	Second quarter.....	4	(X)	(X)	311,278	(X)	198,729	(X)
	First quarter.....	4	(X)	(X)	296,090	(X)	183,723	(X)
32110 17	Bronze.....	(X)	119,655	103,039	103,544	(X)	(D)	31,056
	Fourth quarter.....	3	(X)	(X)	25,547	(X)	(D)	(X)
	Third quarter.....	3	(X)	(X)	27,396	(X)	(D)	(X)
	Second quarter.....	3	(X)	(X)	24,967	(X)	(D)	(X)
	First quarter.....	4	(X)	(X)	25,632	(X)	(D)	(X)
32110 18	Other.....	(X)	218,760	244,509	214,157	(X)	(D)	85,108
	Fourth quarter.....	4	(X)	(X)	60,653	(X)	(D)	(X)
	Third quarter.....	4	(X)	(X)	58,212	(X)	(D)	(X)
	Second quarter.....	4	(X)	(X)	48,001	(X)	(D)	(X)
	First quarter.....	4	(X)	(X)	47,091	(X)	(D)	(X)
32110 04	Outside customer sales.....	(X)	2,507,525	3,021,124	3,139,594	1,055,714	(X)	(X)
	Fourth quarter.....	5	(X)	(X)	781,469	258,291	(X)	(X)
	Third quarter.....	5	(X)	(X)	849,808	274,264	(X)	(X)
	Second quarter.....	5	(X)	(X)	785,274	270,211	(X)	(X)
	First quarter.....	5	(X)	(X)	723,043	252,948	(X)	(X)
32110 21	Glass tempered by primary producers of flat glass.....	(X)	327,314	406,161	381,361	(X)	312,216	(X)
	Fourth quarter.....	4	(X)	(X)	78,148	(X)	66,181	(X)
	Third quarter.....	4	(X)	(X)	109,501	(X)	88,695	(X)
	Second quarter.....	4	(X)	(X)	104,916	(X)	84,206	(X)
	First quarter.....	4	(X)	(X)	88,796	(X)	73,134	(X)
32110 23	Glass used for high-speed tempered residential products.....	(X)	173,781	206,680	208,118	(X)	(D)	(X)
	Fourth quarter.....	4	(X)	(X)	45,579	(X)	(D)	(X)
	Third quarter.....	3	(X)	(X)	58,113	(X)	(D)	(X)
	Second quarter.....	4	(X)	(X)	61,902	(X)	(D)	(X)
	First quarter.....	3	(X)	(X)	42,524	(X)	(D)	(X)

Note: Figures are limited to inventories at manufacturing establishments. For some items, the sum of inventories at the beginning of the quarter plus production, minus shipments, does not equal inventories at the end of the quarter. This is due to breakage and inventory adjustments.

(D) Data withheld to avoid disclosing figures for individual companies. (X) Not applicable.

¹Total ending inventories for 1992 are those shown for the fourth quarter.

Table 3. SUMMARY OF PRODUCTION, SHIPMENTS, AND INVENTORIES OF FLAT GLASS: 1991

Product code	Product description		Number of companies	Total production (short tons)	Total production (1,000 sq. ft.)	Total shipments		Quantity produced and consumed within each company (1,000 sq. ft.)	Inventory, end of quarter ¹ (1,000 sq. ft.)
						Quantity (includes produced and consumed within each company) (1,000 sq. ft.)	Value (current dollars) (\$1,000)		
32110 00	Flat glass	(X)	5	3,648,386	4,284,202	4,327,428	1,350,658	1,115,786	(X)
	Fourth quarter	5		1,019,034	1,185,286	1,092,875	340,555	261,772	707,206
	Third quarter	5		975,429	1,142,327	1,192,941	377,932	321,047	614,795
	Second quarter	5		854,602	1,016,274	1,111,752	334,481	297,433	665,409
	First quarter	5		799,321	940,315	929,860	297,690	235,534	760,887
32115 12	By type:								
	Sheet, plate, and float glass up to .107 inch	(X)	5	1,103,268	1,908,701	1,947,798	(X)	470,947	(X)
	Fourth quarter	5		305,826	529,243	505,374	(X)	105,527	292,332
	Third quarter	5		284,980	492,122	529,977	(X)	130,399	268,463
	Second quarter	5		261,861	455,456	497,132	(X)	128,675	306,318
	First quarter	5		250,601	431,880	415,315	(X)	106,346	347,994
32115 13	.108 inch through .134 inch	(X)	5	876,180	1,088,714	1,070,829	(X)	273,945	(X)
	Fourth quarter	5		234,461	296,966	262,453	(X)	64,681	192,126
	Third quarter	5		247,959	305,969	305,411	(X)	84,931	157,613
	Second quarter	5		212,515	266,269	284,556	(X)	71,500	157,055
	First quarter	5		181,245	219,510	218,409	(X)	52,833	175,342
32115 14	.135 inch through .199 inch	(X)	5	848,932	779,671	805,228	(X)	332,003	(X)
	Fourth quarter	5		238,749	215,210	200,867	(X)	83,221	134,650
	Third quarter	5		231,867	210,064	222,988	(X)	96,231	120,307
	Second quarter	5		195,796	179,492	201,027	(X)	86,202	133,231
	First quarter	5		182,520	174,905	180,346	(X)	66,349	154,766
32115 15	.200 inch and thicker	(X)	5	820,006	507,116	503,573	(X)	38,891	(X)
	Fourth quarter	5		239,998	143,867	124,181	(X)	8,343	88,098
	Third quarter	5		210,623	134,172	134,565	(X)	9,486	68,412
	Second quarter	5		184,430	115,057	129,037	(X)	11,056	68,805
	First quarter	5		184,955	114,020	115,790	(X)	10,006	82,785
32110 14	By color:								
	Pyrolytically coated	(X)	4	135,530	150,127	150,368	(X)	39,169	43,012
	Fourth quarter	4		(X)	(X)	40,738	(X)	12,453	(X)
	Third quarter	4		(X)	(X)	42,529	(X)	10,681	(X)
	Second quarter	4		(X)	(X)	37,512	(X)	10,218	(X)
	First quarter	4		(X)	(X)	29,589	(X)	5,817	(X)
32110 15	Nonpyrolytically coated:								
	Clear	(X)	5	2,357,789	2,714,074	2,680,178	(X)	329,619	473,848
	Fourth quarter	5		(X)	(X)	664,045	(X)	74,608	(X)
	Third quarter	5		(X)	(X)	726,163	(X)	91,263	(X)
	Second quarter	5		(X)	(X)	703,774	(X)	90,870	(X)
	First quarter	5		(X)	(X)	586,196	(X)	72,878	(X)
32110 16	Green	(X)	4	855,525	1,141,110	1,233,114	(X)	692,523	104,029
	Fourth quarter	4		(X)	(X)	318,331	(X)	159,373	(X)
	Third quarter	4		(X)	(X)	333,178	(X)	192,827	(X)
	Second quarter	4		(X)	(X)	317,571	(X)	189,048	(X)
	First quarter	4		(X)	(X)	264,034	(X)	151,275	(X)
32110 17	Bronze	(X)	3	125,250	107,226	103,996	(X)	(D)	31,561
	Fourth quarter	3		(X)	(X)	27,194	(X)	(D)	(X)
	Third quarter	3		(X)	(X)	27,835	(X)	(D)	(X)
	Second quarter	3		(X)	(X)	25,155	(X)	(D)	(X)
	First quarter	3		(X)	(X)	23,812	(X)	(D)	(X)
32110 18	Other	(X)	5	174,292	171,665	159,772	(X)	(D)	54,756
	Fourth quarter	5		(X)	(X)	42,567	(X)	(D)	(X)
	Third quarter	5		(X)	(X)	63,236	(X)	(D)	(X)
	Second quarter	5		(X)	(X)	27,740	(X)	(D)	(X)
	First quarter	5		(X)	(X)	26,229	(X)	(D)	(X)
32110 04	Outside customer sales	(X)	5	2,586,264	2,931,837	2,968,442	961,541	(X)	(X)
	Fourth quarter	5		(X)	(X)	752,343	239,772	(X)	(X)
	Third quarter	5		(X)	(X)	807,962	264,841	(X)	(X)
	Second quarter	5		(X)	(X)	761,705	238,526	(X)	(X)
	First quarter	5		(X)	(X)	646,432	218,402	(X)	(X)
32110 21	Glass tempered by primary producers of flat glass	(X)	4	287,222	333,641	333,601	(X)	269,709	(D)
	Fourth quarter	4		(X)	(X)	82,251	(X)	63,914	(X)
	Third quarter	4		(X)	(X)	110,377	(X)	86,845	(X)
	Second quarter	4		(X)	(X)	80,189	(X)	68,796	(X)
	First quarter	4		(X)	(X)	60,784	(X)	50,154	(X)
32110 23	Glass used for high-speed tempered residential products	(X)	3	167,525	193,073	192,211	(X)	(D)	(D)
	Fourth quarter	3		(X)	(X)	40,072	(X)	(D)	(X)
	Third quarter	3		(X)	(X)	56,065	(X)	(D)	(X)
	Second quarter	3		(X)	(X)	57,893	(X)	(D)	(X)
	First quarter	3		(X)	(X)	38,181	(X)	(D)	(X)

Note: Figures are limited to inventories at manufacturing establishments. For some items, the sum of inventories at the beginning of the quarter plus production, minus shipments, does not equal inventories at the end of the quarter. This is due to breakage and inventory adjustments.

(D) Data withheld to avoid disclosing figures for individual companies. (X) Not applicable.

¹Total ending inventories for 1991 are those shown for the fourth quarter.

Table 4. VALUE OF SHIPMENTS, EXPORTS, AND IMPORTS OF FLAT GLASS: 1990 TO 1992

[Thousands of dollars]

Year and quarter	Manufacturers' shipments (f.o.b. plant) ¹	Exports of domestic merchandise ² (value at port)	Percent exports to manufacturers' shipments	Imports for consumption ³ (value at port)	Apparent consumption ⁴	Percent imports to apparent consumption
1992						
Total.....	1,462,943	317,171	21.7	97,777	1,243,549	7.9
Fourth quarter	352,377	78,046	22.1	27,452	301,783	9.1
Third quarter	374,278	83,209	22.2	24,626	315,695	7.8
Second quarter	374,276	78,125	20.9	21,921	318,072	6.9
First quarter	362,012	77,791	21.5	23,778	307,999	7.7
1991						
Total.....	1,350,658	327,893	24.3	86,779	1,109,544	7.8
Fourth quarter	340,555	82,625	24.3	26,492	284,422	9.3
Third quarter	377,932	88,785	23.5	24,327	313,474	7.8
Second quarter	334,481	81,582	24.4	18,047	270,946	6.7
First quarter	297,690	74,901	25.2	17,913	240,702	7.4
1990						
Total.....	1,471,447	310,477	21.1	57,884	1,218,854	4.7
Fourth quarter	342,085	77,134	22.5	16,467	281,418	5.9
Third quarter	380,773	80,689	21.2	14,120	314,204	4.5
Second quarter	382,523	78,937	20.6	15,569	319,155	4.9
First quarter	366,066	73,717	20.1	11,728	304,077	3.9

¹The value of "Manufacturers' shipments" is in current dollars.²Source: Bureau of the Census report EM 545, *U.S. Exports*.³Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.⁴"Apparent consumption" is derived by subtracting "Exports" from the total of "Manufacturers' shipments," plus "Imports," including duty.

HISTORICAL NOTE

Data on flat glass have been collected by the Bureau of the Census since 1957. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact the Bureau of the Census, Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Al Foreman, 301-763-5531 or John Miller, 301-763-7837.

5.2 CONSUMER, SCIENTIFIC, TECHNICAL, AND INDUSTRIAL GLASSWARE

INTRODUCTION

The data in this section are from a survey of manufacturers of consumer, scientific, technical, and industrial glassware in the United States. Establishments manufacturing glassware from glass produced in their own establishment, and establishments manufacturing glassware from glass purchased or transferred from other establishments are included. Data are collected by value of shipments in three major categories: table, kitchen, art, and novelty glassware; lighting and electronic glassware; and all other glassware. Related import and export data are also shown.

SUMMARY OF FINDINGS

Total factory shipments of consumer, scientific, technical, and industrial glassware increased 5 percent to \$3,893.6 million in 1992 from \$3,707.4 million in 1991. Establishments manufacturing glassware from glass produced in their own establishment accounted for approximately 62 percent of the total glassware shipments.

Consumer (table, kitchen, art, and novelty) glassware shipments increased 7.7 percent to \$1,544.9 million in 1992 from \$1,433.6 million in 1991. This accounted for approximately 40 percent of the total glassware shipments in 1992, up from 39 percent in 1991. Establishments manufacturing glassware from glass produced in their own establishment accounted for approximately 46 percent of the total consumer (table, kitchen, art, and novelty) glassware shipments.

Lighting and electronic glassware shipments increased 6.5 percent to \$1,263.9 million in 1992 from \$1,187.1 million in 1991. This accounted for approximately 32 percent of the total glassware shipments in 1992 and 1991. Establishments manufacturing glassware from glass produced in their own establishment accounted for approximately 90 percent of the total lighting and electronic glassware shipments.

All other glassware shipments decreased 0.2 percent to \$1,076.8 million in 1992 from \$1,079.1 million in 1991. This accounted for approximately 28 percent of the total glassware shipments in 1992, down from 29 percent in 1991. Establishments manufacturing glassware from glass produced in their own establishment accounted for approximately 51 percent of all other glassware shipments.

EXPLANATION OF TERMS

Tumblers. Nonstemmed drinking glasses. Excludes packers' tumblers.

Stemware. Vessels with long and short stems and footedware used generally for drinking; however, it may be used as dessert dishes.

Tableware. Items from which food and beverages are served or consumed, but not prepared. Excludes stemware and tumblers.

Cookware, Ovenware, and Kitchenware. Items of ceramic glass and heat-resistant glass used to cook over direct heat or in the oven, and items used in the preparation and storage of foods (e.g., cookie jars, mixing bowls, refrigerator dishes, and measuring cups).

Microwave Specialty Pieces. Cookware and ovenware designed especially for microwave usage.

Ornamental, Decorative, Novelty Glassware, and Smokers' Accessories. Includes floralware, ash trays, humidors, apothecary, bathroom dishes, candy dishes, beverage coasters, fish bowls, and piggy banks.

Automotive Lighting Glassware. Includes sealed beam lenses, and other outside lenses, and interior automotive glassware.

Searchlight and Other Lenses. Includes railroad, marine, air, and traffic lighting glassware.

Electric Light Bulb Blanks. Includes incandescent, photo flash and mercury vapor, and high temperature lamps.

Tubing and Cane for Electric Light Bulbs and Fluorescent and Neon Lighting. Includes exhaust tubes and flares for incandescent and fluorescent lamps.

Electronic Tube Blanks. Includes radio, x-ray, radar, special tubes, cathode ray, power tubes, microwave, and storage tubes. Excludes television picture tube blanks and parts.

Television Tube Blanks and Parts. Includes cylinders, rod-support insulators, diodebeads and bodies, multiform parts and moisture getters.

Bowls and Enclosing Globes, Etc. Includes lantern globes, chimneys, enclosing globes, shades, prismatic and diffusing globes, luminaire globes, decorative lighting glass parts, and shields and plates for fluorescent and incandescent lighting fixtures.

Other Lighting and Electronic Glassware. Includes dials, insulators, custom-made lighting, and electronic glassware.

Scientific and Laboratory Glassware. Includes beads, beakers, bottles, burrets, centrifuge tubes, condensers, connecting tubes, crucibles, cylinders, desiccators, fritted discs, flasks, funnels, ground joints, jars, microscope slides, cover glasses, Petri culture dishes, pipets, special laboratory apparatus, stopcocks, test and culture tubes, thermometer and hydrometer blanks, and custom-made laboratory apparatus.

Tubing, Rods, and Canes, All Types (Except Electrical and Electronic). Items used for volumetric ware, advertising purposes, heat absorbing uses, and precision base applications.

Industrial and Technical Glassware. Includes battery jars, industrial beads, blender jars, caps and bodies, coffee urn liners, explosion capsules, flow meter blanks, gauge

glasses, lubrication glasses, copy machine cylinders, sight glasses, vacuum bottle parts, godet wheels, heat exchangers, milking machine accessories, glass pipe for chemical and food process and drainlines, rashing rings, ground glass, glass knobs, and insulators.

Ophthalmic Lens Blanks and Optical Instrument Lens Blanks. Includes ophthalmic and optical lens blanks, color filters, photographic window blanks, prism blanks, telescope mirror blanks, infrared and ultraviolet transmitting glasses, fiber optic glass parts. Excludes finished or semi-finished lenses.

Other Glassware. Includes such products as glass blocks, nursery bottles, balls, radomes, nose cones, vials, and towel bars.

Table 5. **VALUE OF SHIPMENTS OF CONSUMER, SCIENTIFIC, TECHNICAL, AND INDUSTRIAL GLASSWARE: 1988 TO 1992**

[Millions of dollars]

Product code	Product description	1992	1991	1990	1989	1988
32295, 32298, 32311, 32312	Table, kitchen, art, and novelty glassware ¹	1,544.9	1,433.6	1,397.3	1,359.8	1,362.3
32296, 32298, 32311, 32312	Lighting and electronic glassware ¹	1,263.9	1,187.1	1,078.7	1,093.0	989.3
32297, 32298, 32311, 32312	All other glassware ¹	1,076.8	1,079.1	1,105.3	1,120.8	996.6

¹The difference between industry 3229 and 3231 is as follows: industry 3229 represents glassware produced from glass made in the same establishment; whereas, industry 3231 represents glassware produced or fabricated from glass purchased or transferred from other establishments.

Table 6. **VALUE OF SHIPMENTS OF CONSUMER, SCIENTIFIC, TECHNICAL, AND INDUSTRIAL GLASSWARE, BY INDUSTRY: 1992 AND 1991**

[Millions of dollars]

Product code	Product description	1992			1991		
		Total (all industries)	SIC 3229	All other industries	Total (all industries)	SIC 3229	All other industries
3229 —, 32311 —, 32312 —	Consumer, scientific, technical, and industrial glassware	3,893.6	2,415.8	1,477.8	3,707.4	2,293.9	1,413.6
32295 —, 32298 —, 32311 —, 32312 —	Table, kitchen, art, and novelty glassware. .	1,544.9	715.7	829.2	1,433.6	668.3	765.3
32296 —, 32298 —, 32311 —, 32312 —	Lighting and electronic glassware	1,263.9	1,142.9	120.9	1,187.1	1,081.2	106.0
32297 —, 32298 —, 32311 —, 32312 —	All other glassware	1,076.8	551.2	525.6	1,079.1	538.8	540.3
32295 00, 32296 00, 32297 00, 32298 00, 32311 00, 32312 00	Consumer, scientific, technical, and industrial glassware n.s.k.	8.0	5.9	2.1	7.6	5.6	2.0

Note: Detail may not add to the total due to independent rounding.

n.s.k. Not specified by kind. 'Revised by 5 percent or more from previously published figures.

Table 7. SHIPMENTS OF CONSUMER GLASSWARE: 1992 AND 1991

[Value in thousands of dollars]

Product code	Product description ¹	Unit of measure	Number of companies	1992				1991			
				Total (all industries)		Machine-made ² (SIC 3229)		Hand-made ² (SIC 3229)		Total (all industries)	
				Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
32295 —, 32298 —, 32311 —, 32312 —	Table, kitchen, art, and novelty glassware.....	... (X) ...	(X)	(X)	1,324,918	(X)	571,410	(X)	144,329	(X)	1,205,744
3229X 21, 3231X 21	Tumblers (one piece, excluding packers' tumblers)	M dozen ..	23	53,758	248,802	48,087	238,549	123	1,066	50,288	230,987
3229X 22, 3231X 22	Stemware.....	....do	18	11,710	146,085	(D)	(D)	(D)	(D)	11,492	136,516
3229X 23, 3231X 23	Tableware	M pieces	22	122,820	225,338	85,255	76,195	(D)	(D)	118,631	210,525
3229X 25, 3231X 25, 3229X 27, 3231X 27	Cookware, ovenware, and kitchenware, including microwave specialty pieces .....	....do	(NA)	85,760	220,003	(D)	(D)	-	-	88,325	227,889
3229X 28, 3231X 28	Ornamental, decorative, and novelty glassware, and smokers' accessories .....	....do	40	(X)	(³)	(X)	(³)	(X)	(³)	(X)	(³)
3229X 38, 3231X 38	Other table, kitchen, art, and novelty glassware.....	.. (X)	23	(X)	(³)	(X)	(³)	(X)	(³)	(X)	(³)
3229X 39, 3231X 39	Interplant transfers of shipments of partially made glassware to other glassware establishments ⁴ .....	.. (X)	(X)	(X)	3704,693	(X)	391,969	(X)	3110,782	(X)	3627,716
											375,882
											3108,882

- Represents zero.
(X) Not applicable.

(D) Data withheld to avoid disclosing figures for individual companies.

(NA) Not available.

Revised by 5 percent or more over previously published figures.

¹See text for specific definitions of individual products.²Shipments by establishments manufacturing glassware primarily from glass produced in the same establishment.³Data for product codes 3229X 28, 3231X 28, 3229X 38, and 3231X 38 are included with product codes 3229X 39 and 3231X 39 to avoid disclosure of individual company figures.⁴The processing establishments report the finished product on the appropriate lines, in order to avoid duplicate reporting of the same product by separate establishments.

Table 8. VALUE OF SHIPMENTS OF SCIENTIFIC, TECHNICAL, AND INDUSTRIAL GLASSWARE: 1992 AND 1991

[Value in thousands of dollars]

Product code	Product description ¹	Number of companies	1992		1991	
			Total (all industries)	Machine-made ² (SIC 3229)	Total (all industries)	Machine-made ² (SIC 3229)
32296 —, 32298 —, 32311 —, 32312 —	Lighting and electronic glassware	(X)	1,263,886	1,142,942	1,187,132	1,081,175
3229Y 41, 3231Y 41	Automotive lighting glassware.....	6	(D)	(D)	(D)	(D)
3229Y 43, 3231Y 43	Searchlight and other lenses.....	7	9,897	(D)	10,627	(D)
3229Y 45, 3231Y 45	Electric light bulb blanks.....	6	130,447	106,100	129,751	105,855
3229Y 47, 3231Y 47	Tubing and cane for electric light bulbs and fluorescent and neon lighting	6	(D)	(D)	(D)	(D)
3229Y 51, 3231Y 51	Electric tube blanks (except television)	7	11,280	(D)	11,769	(D)
3229Y 55, 3231Y 55	Television tube blanks and parts; tubing, cane, and glass parts for electronic tubes and devices.....	12	639,634	633,562	580,743	572,586
3229Y 57, 3231Y 57	Bowls and enclosing globes, lamp chimneys, lamp parts, shade reflectors, and torchieres: Interior	20	83,533	77,384	82,709	77,177
3229Y 59, 3231Y 59	Exterior.....	8	8,834	(D)	8,044	(D)
3229Y 65, 3231Y 65	Other lighting and electronic glassware	9	(D)	(D)	(D)	(D)
3229Y 69, 3231Y 69	Interplant transfers and shipments of partially made glassware to other glassware establishments ³	(X)	103,656	99,695	106,655	103,916
32297—, 32298—, 32311—, 32312—	All other glassware	(X)	1,076,841	551,221	1,079,058	538,788
3229Z 71, 3231Z 71	Tubing, rods, canes, all types, except electrical and electronic	15	(D)	(D)	(D)	(D)
3229Z 72, 3231Z 72	Scientific and laboratory glassware	(X)	425,586	189,000	407,146	179,775
3229Z 74, 3231Z 74	Reusable	46	247,618	99,959	241,715	97,230
3229Z 75, 3231Z 75	Disposable.....	18	177,968	89,041	165,431	82,545
3229Z 77, 3231Z 77	Technical and industrial glassware.....	40	229,399	85,031	244,401	93,668
3229Z 79, 3231Z 79	Ophthalmic lens blanks and optical instruments' lens blanks.....	17	110,435	100,947	110,717	101,055
3229Z 89, 3231Z 89	Other glassware (e.g., radomes, nose cones, nursery bottles, and vials)	20	226,220	100,576	242,536	100,580
32295 00, 32296 00, 32297 00, 32298 00, 32311 00, 32312 00	Interplant transfers and shipments of partially made glassware to other glassware establishments ³	8	(D)	(D)	(D)	(D)
	Consumer, scientific, technical, and industrial glassware n.s.k. ⁴	(X)	7,996	5,915	7,614	5,616

(D) Data withheld to avoid disclosing figures for individual companies. n.s.k. Not specified by kind. (X) Not applicable. ¹Revised by 5 percent or more over previously published figures.

¹See text for specific definitions of individual products.

²Shipments by establishments manufacturing glassware primarily from glass produced in the same establishment.

³The processing establishments report the finished product on the appropriate lines, in order to avoid duplicate reporting of the same product by separate establishments.

⁴Not specified by kind (n.s.k.) represents the value of shipments for establishments that did not provide detailed information by type of product. These establishments, typically with less than five employees, are not included in the MA32E mailing panel. The value of shipments has been estimated for series MA32E based on the year-to-year rate of change for reporting establishments, applied to the previous year's n.s.k. value.

Table 9. **VALUE OF SHIPMENTS, EXPORTS, IMPORTS AND APPARENT CONSUMPTION OF CONSUMER, SCIENTIFIC, TECHNICAL, AND INDUSTRIAL GLASSWARE: 1992 AND 1991**

[Thousands of dollars]

Product description	Manu- facturers' shipments	Exports of domestic merchandise ^{1 2}	Percent exports to manufac- turers' shipment	Imports for consumption ^{1 3}	Apparent consumption ⁴	Percent imports to apparent consumption
1992						
Table, kitchen, art, and novelty glassware	1,544,921	151,086	9.8	685,697	2,079,532	33.0
Searchlight and other lenses.....	9,897	11,198	113.1	10,245	8,944	114.5
Lighting glassware	130,447	19,449	14.9	9,429	120,427	7.8
Electronic tube blanks, including TV tube blanks and parts	650,914	14,812	2.3	109,405	745,507	14.7
Lamp chimneys, bowls, shades, globes, parts, and other glassware, interior and exterior.	92,367	(NA)	(NA)	89,031	(NA)	(NA)
Glass tubing, rods, and canes, all types (except electrical and electronic).....	(D)	46,282	(D)	60,659	(D)	(D)
Scientific and laboratory glassware, reusable and disposable	425,586	93,396	21.9	29,241	361,431	8.1
Ophthalmic lens blanks and optical lens blanks ..	110,435	45,499	41.2	17,690	82,626	21.4
1991						
Table, kitchen, art, and novelty glassware	1,433,633	136,590	9.5	609,131	1,906,174	32.0
Searchlight and other lenses.....	10,627	12,661	119.1	13,762	11,728	117.3
Lighting glassware	129,751	18,441	14.2	7,509	118,819	6.3
Electronic tube blanks, including TV tube blanks and parts	592,512	14,929	2.5	63,917	641,500	10.0
Lamp chimneys, bowls, shades, globes, parts, and other glassware, interior and exterior.	90,753	(NA)	(NA)	30,552	(NA)	(NA)
Glass tubing, rods, and canes, all types (except electrical and electronic).....	(D)	87,359	(D)	46,721	(D)	(D)
Scientific and laboratory glassware, reusable and disposable	407,146	91,199	22.4	28,800	344,747	8.4
Ophthalmic lens blanks and optical lens blanks ..	110,717	45,462	41.1	18,839	84,094	22.4

(D) Data withheld to avoid disclosing figures for individual companies.

(NA) Not available.

¹For comparison of domestic manufacturers' shipments, import numbers, and export numbers, see appendix B.²Source: Bureau of the Census data relating to EM 545, *U.S. Exports*.³Source: Bureau of the Census data relating to IM 146, *U.S. Imports for Consumption and General Imports*.⁴"Apparent consumption" is derived by subtracting "Exports" from the total of "Shipments," plus "Imports," including duty.

HISTORICAL NOTE

Data on glassware have been collected by the Bureau of the Census since 1942. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact the Bureau of the Census, Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Joyce Pomeroy, 301-763-2303 or John Miller, 301-763-7837.

5.3 GLASS CONTAINERS

INTRODUCTION

The series on glass containers provides data on the production of glass containers regardless of where they are manufactured. Many containers are actually produced by companies that produce the container as a secondary operation to making the product that goes in the container.

EXPLANATION OF TERMS

Food. Narrow neck bottles for commercial food packers. For example, bottles to contain the following: catsup; concentrated beverage syrup; edible oils; flavoring extracts; fruit juices, blends and ades, including milk style bottle; meat sauces; infant formula; syrups; liquid salad dressings; vegetable juices; and vinegars.

Medicinal and Health Supplies. Narrow neck containers for products that are primarily intended to improve or maintain the health of human beings or animals. Examples of the products/bottles are as follows: citrate of magnesia; essential oils; extracts for medicinal purposes; linaments; nursing bottles; oral antiseptic; pharmaceuticals; prescription bottles; proprietary medicines; serums and parenterals veterinary supplies.

Chemical, Household and Industrial. Narrow neck containers for products not used in connection with human or animal bodies. Examples of the products/bottles are as follows: ammonias; bleaches; bluing; cements; cleaning fluids; disinfectants; dyes; embalming fluids; glues; inks; insecticides; lubricating oils; polishes and waxes; refrigerator water bottles; and waxes.

Toiletries and Cosmetics. Narrow neck containers for products intended primarily to improve personal appearance or to impart a pleasing odor. Examples of these products are as follows: bath salts and oils; hair shampoos/conditioners; hair tonics; hand/body lotions and creams; liquid soaps; nail care products; perfumes and colognes; personal deodorants; powders; toilet waters.

Beverage, Refillable. Bottles for soft drinks, carbonated or noncarbonated, designed for multiple-trip use.

Beverage, Nonrefillable. Bottles for soft drinks, carbonated or noncarbonated, designed for single-trip use.

Beer, Refillable. Bottles for alcoholic cereal beverages (e.g., beer, ale, and porter) designed for multiple-trip use, including malt coolers.

Beer, Nonrefillable. Bottles for alcoholic cereal beverages designed for single-trip use, including malt coolers.

Liquors. Bottles designed for bottling alcoholic beverages except wines and malt beverages. Included are products such as brandies, cordials, gins, rum, and distilled spirits.

Wine. Bottles designed for bottling wines, whether sparkling or still, and champagnes and vermouths, including wine coolers.

Food (Including Packers' Tumblers, Fruit Jars and Jelly Glasses). Wide mouth containers sold to commercial food packers and for use in home canning. Examples of the products put in these jars are as follows: baby foods; candies; coffee; edible oils; fruits and vegetables; fruit juices (e.g., apple juice and orange juice); mayonnaise and salad dressings; meat and fish products; mustard; peanut butter; pickles and relishes; preserves; jams; and jellies; and syrups.

Dairy Products. Containers used by dairies for fluid milk and cream; cottage cheese; whole or skim milk (flavored or unflavored), when bottled at the dairy, are included under dairy products even though they are bottled in beverage style bottles with crown closures.

Export. This classification applies to any of the above shipped to packers and bottlers outside the 50 States and the District of Columbia, including shipments to Puerto Rico as exports.

Narrow Neck. Less than 38-millimeter outside diameter.

Wide Mouth. 38-millimeter or greater outside diameter.

Table 10. SUMMARY OF SHIPMENTS, PRODUCTION, AND STOCKS OF GLASS CONTAINERS: 1992 AND 1991

[Thousands of gross]

Month and year	Shipments			Production			Stocks, end of month		
	Total	Narrow neck containers	Wide mouth containers	Total	Narrow neck containers	Wide mouth containers	Total	Narrow neck containers	Wide mouth containers
1992									
Total	282,703	210,437	72,266	286,046	212,646	73,400	(X)	(X)	(X)
December.....	20,611	15,321	5,290	19,994	14,819	5,175	45,930	31,413	14,517
November.....	20,847	15,087	5,760	22,587	16,624	5,963	46,700	31,947	14,753
October.....	24,106	17,415	6,691	25,001	18,377	6,624	44,499	30,587	13,912
September.....	24,162	17,724	6,438	23,268	17,502	5,766	43,384	29,810	13,574
August.....	24,871	18,843	6,028	25,053	19,344	5,709	43,875	30,149	13,726
July.....	25,999	19,547	6,452	24,946	18,538	6,408	45,101	29,733	15,368
June.....	26,107	19,819	6,288	24,568	18,335	6,233	45,531	30,599	14,932
May.....	25,381	19,206	6,175	24,157	18,043	6,114	47,820	32,699	15,121
April.....	24,091	18,390	5,701	24,427	18,206	6,221	48,526	33,567	14,959
March.....	25,387	18,852	6,535	25,812	18,837	6,975	49,429	34,269	15,160
February.....	20,372	15,138	5,234	24,019	17,577	6,442	48,830	34,402	14,428
January.....	20,769	15,095	5,674	22,214	16,444	5,770	45,424	32,090	13,334
1991									
Total	278,575	203,892	74,683	282,048	207,944	74,104	(X)	(X)	(X)
December.....	18,284	13,389	4,895	17,533	12,764	4,769	44,076	30,736	13,340
November.....	21,121	14,993	6,128	22,976	16,564	6,412	45,655	32,235	13,420
October.....	24,575	17,283	7,292	25,409	18,548	6,861	44,119	31,284	12,835
September.....	23,229	17,005	6,224	22,298	16,725	5,573	43,501	30,817	12,684
August.....	26,319	19,346	6,973	25,576	18,988	6,588	44,522	31,189	13,333
July.....	25,545	19,329	6,216	25,175	18,524	6,651	45,455	31,729	13,726
June.....	25,431	19,382	6,049	24,428	18,451	5,977	46,089	32,910	13,179
May.....	26,198	19,518	6,680	25,306	18,598	6,708	47,049	33,964	13,085
April.....	24,547	17,916	6,631	24,371	17,461	6,910	48,201	34,945	13,256
March.....	22,539	16,599	5,940	24,194	17,940	6,254	48,551	35,852	12,699
February.....	19,823	14,179	5,644	22,341	16,473	5,868	47,192	34,568	12,624
January.....	20,964	14,953	6,011	22,441	16,908	5,533	44,817	32,181	12,636

(X) Not applicable.

Table 11. **SHIPMENTS AND PRODUCTION OF GLASS CONTAINERS, BY TYPE OF CONTAINERS: 1987 TO 1992**

[Thousands of gross]

Product code	Product description	1992	1991	1990	1989	1988	1987
SHIPMENTS							
	All types	282,703	278,575	284,986	285,586	280,439	281,636
	Narrow neck containers ¹	210,437	203,892	213,019	215,582	212,595	218,963
	Wide mouth containers	72,266	74,683	71,967	70,004	67,844	62,673
	By end use:						
	Food:						
32210 11	Narrow neck.	26,516	23,477	23,546	22,010	22,100	27,252
32210 31, 37	Wide mouth, including dairy	72,266	74,683	71,967	70,004	67,844	62,673
32210 19, 50	Beverages (refillable and nonrefillable) ...	53,865	57,141	60,261	63,813	62,382	62,434
32210 23, 60	Beer (refillable and nonrefillable)	88,825	84,304	88,551	88,556	86,285	85,357
32210 27	Liquor	11,312	10,565	11,185	11,268	10,362	11,849
32210 29	Wine	14,591	13,473	15,112	14,791	16,129	16,533
	Other (narrow neck and wide mouth):						
32210 13, 32	Medicinal and health supplies (narrow neck and wide mouth)	9,056	8,872	9,180	9,577	9,383	8,549
32210 15, 33	Chemical, household, and industrial (narrow neck and wide mouth)	1,236	1,198	1,174	1,318	1,357	1,371
32210 17, 34	Toiletries and cosmetics (narrow neck and wide mouth)	5,036	¹ 4,862	4,010	4,249	4,597	5,618
PRODUCTION							
	All types	286,046	282,048	289,704	287,511	284,473	285,030
	Narrow neck containers ¹	212,646	207,944	216,501	216,306	216,559	222,102
	Wide mouth containers	73,400	74,104	73,203	71,205	67,914	62,928
	By end use:						
	Food:						
32210 11	Narrow neck.	28,282	24,641	24,309	22,192	22,929	28,310
32210 31, 37	Wide mouth, including dairy	73,400	74,104	73,203	71,205	67,914	62,928
32210 19, 50	Beverages (refillable and nonrefillable) ...	49,900	57,119	59,412	62,031	62,264	63,502
32210 23, 60	Beer (refillable and nonrefillable)	91,229	84,601	90,581	88,523	88,257	85,465
32210 27	Liquor	11,663	11,261	11,354	11,030	10,232	12,244
32210 29	Wine	13,726	13,906	15,626	14,850	16,494	17,115
	Other (narrow neck and wide mouth):						
32210 13, 32	Medicinal and health supplies (narrow neck and wide mouth)	11,138	10,140	9,736	11,683	10,180	8,438
32210 15, 33	Chemical, household, and industrial (narrow neck and wide mouth)	1,352	1,246	1,234	1,434	1,392	1,343
32210 17, 34	Toiletries and cosmetics (narrow neck and wide mouth)	5,356	¹ 5,030	4,249	4,563	4,811	5,685

Note: Data on the foreign trade of glass containers are as follows: Exports of domestic merchandise: 1992, 9,303; 1991, 7,321; imports for consumption: 1992, 13,795; 1991, 12,435.

¹Revised by 5 percent or more from previously published figures.

¹Includes data for wide mouth containers in the following categories: Medicinal and health; Chemical, household, and industrial; and Toiletries and cosmetics, to avoid disclosure of individual company data.

Table 12. SHIPMENTS, PRODUCTION, AND STOCKS OF GLASS CONTAINERS: 1992

Product code	Product description	Total	January	February	March	April	May	June	July	August	September	October	November	December
	NET PACKED WEIGHT¹ (Thousands of pounds)													
	All types.....	22,028,712	1,657,505	1,729,646	1,925,228	1,882,134	1,911,118	1,901,994	1,941,007	1,920,308	1,816,429	1,991,219	1,782,271	1,569,853
	Narrow neck containers ²	16,100,486	1,207,300	1,277,866	1,402,250	1,386,778	1,402,456	1,379,050	1,416,151	1,441,397	1,338,381	1,438,942	1,275,093	1,134,822
	Wide mouth containers.....	5,928,226	450,205	451,780	522,978	495,356	508,662	522,944	524,856	478,911	478,048	552,277	507,178	435,031
	By end use:													
	Food:													
32210 11	Narrow neck.....	2,043,477	127,441	148,065	192,764	197,420	164,172	196,755	184,590	217,533	179,350	176,158	133,824	125,405
32210 31,	Wide mouth, including dairy.....	5,928,226	450,205	451,780	522,978	495,356	508,662	522,944	524,856	478,911	478,048	552,277	507,178	435,031
37														
32210 19,	Beverages (refillable and nonrefillable)...	3,316,999	290,902	276,228	281,228	286,961	279,567	270,138	319,156	275,912	271,306	272,822	253,247	239,532
50														
32210 23,	Beer (refillable and nonrefillable).....	6,568,390	474,586	509,932	565,007	548,978	579,672	584,108	575,141	573,480	543,743	594,224	533,132	486,387
60														
32210 27	Liquor.....	1,461,876	106,779	121,478	129,802	108,992	114,093	105,552	129,256	141,898	129,405	152,166	121,178	101,277
32210 29	Wine.....	2,045,012	147,377	155,757	166,895	166,869	205,899	167,017	155,167	170,284	173,001	194,938	191,563	150,245
	Other (narrow neck and wide mouth):													
32210 13,	Medicinal and health supplies (narrow	442,558	39,520	46,981	46,543	54,795	40,371	36,120	36,455	44,333	27,163	30,534	22,678	17,065
32	neck and wide mouth).....													
32210 15,	Chemical, household, and industrial	71,332	8,398	7,511	3,668	4,508	3,271	7,469	4,705	5,164	4,497	6,968	9,627	5,546
33	(narrow neck and wide mouth).....													
32210 17,	Toiletries and cosmetics (narrow neck	150,842	12,297	11,914	16,343	18,255	15,411	11,891	11,681	12,793	9,916	11,132	9,844	9,365
34	and wide mouth).....													
	SHIPMENTS													
	(Thousands of gross)													
	All types.....	282,703	20,769	20,372	25,387	24,091	25,381	26,107	25,999	24,871	24,162	24,106	20,847	20,611
	Narrow neck containers ²	210,437	15,095	15,138	18,852	18,390	19,206	19,819	19,547	18,843	17,724	17,415	15,087	15,321
	Wide mouth containers.....	72,266	5,674	5,234	6,535	5,701	6,175	6,288	6,452	6,028	6,438	6,691	5,760	5,290
	By end use:													
	Food:													
32210 11	Narrow neck.....	26,516	1,642	1,866	2,370	2,267	2,299	2,633	2,464	2,884	2,616	2,387	1,552	1,536
32210 31,	Wide mouth, including dairy.....	72,266	5,674	5,234	6,535	5,701	6,175	6,288	6,452	6,028	6,438	6,691	5,760	5,290
37														
32210 19,	Beverages (refillable and nonrefillable)...	53,865	3,811	3,791	4,888	4,757	5,303	5,545	5,175	4,718	4,569	4,197	3,617	3,494
50														
32210 23,	Beer (refillable and nonrefillable).....	88,825	6,397	6,341	7,823	7,695	8,052	7,851	8,430	7,506	7,279	7,523	6,719	7,209
60														
32210 27	Liquor.....	11,312	809	845	1,022	894	912	1,099	1,010	1,076	965	964	893	823
32210 29	Wine.....	14,591	1,108	958	1,306	1,400	1,409	1,508	1,398	1,371	1,045	1,063	1,044	981
	Other (narrow neck and wide mouth):													
32210 13,	Medicinal and health supplies (narrow	9,056	818	791	856	810	692	692	594	774	757	759	752	761
32	neck and wide mouth).....													
32210 15,	Chemical, household, and industrial	1,238	126	155	107	77	67	94	95	105	101	106	100	103
33	(narrow neck and wide mouth).....													
32210 17,	Toiletries and cosmetics (narrow neck	5,038	384	391	480	490	472	397	381	409	392	416	410	414
34	and wide mouth).....													

See footnotes at end of table.

Table 12. SHIPMENTS, PRODUCTION, AND STOCKS OF GLASS CONTAINERS: 1992—Continued

Product code	Product description	Total	January	February	March	April	May	June	July	August	September	October	November	December
	PRODUCTION (Thousands of gross)													
	All types.....	286,046	22,214	24,019	25,812	24,427	24,157	24,568	24,946	25,053	23,268	25,001	22,587	19,994
	Narrow neck containers ²	212,646	16,444	17,577	18,837	18,206	18,043	18,335	18,538	19,344	17,502	18,377	16,624	14,819
	Wide mouth containers.....	73,400	5,770	6,442	6,975	6,221	6,114	6,233	6,408	5,709	5,766	6,624	5,963	5,175
	By end use:													
	Food:													
32210 11	Narrow neck.....	28,282	1,857	2,265	2,616	2,597	2,244	2,639	2,563	3,064	2,395	2,433	1,910	1,699
32210 31,	Wide mouth, including dairy.....	73,400	5,770	6,442	6,975	6,221	6,114	6,233	6,408	5,709	5,766	6,624	5,963	5,175
37														
32210 19,	Beverages (refillable and nonrefillable).....	49,900	4,598	4,317	4,227	4,305	4,164	4,137	4,769	4,044	3,992	4,034	3,758	3,555
50														
32210 23,	Beer (refillable and nonrefillable).....	91,229	6,664	7,044	8,010	7,427	7,907	8,104	7,815	8,113	7,671	8,216	7,557	6,701
60														
32210 27	Liquor.....	11,663	854	1,205	1,064	863	876	847	1,047	1,159	993	1,141	887	727
32210 29	Wine.....	13,726	1,003	979	1,177	1,230	1,365	1,240	1,041	1,219	1,185	1,156	1,196	935
	Other (narrow neck and wide mouth):													
32210 13,	Medicinal and health supplies (narrow	11,138	898	1,156	1,103	1,222	900	809	798	1,166	779	845	767	695
32	neck and wide mouth).....													
32210 15,	Chemical, household, and industrial	1,352	'150	'189	'88	'94	'61	'130	'98	'112	'87	112	135	96
33	(narrow neck and wide mouth).....													
32210 17,	Toiletries and cosmetics (narrow neck	5,356	'420	'422	'552	468	'526	'429	'407	'467	'400	'440	'414	'411
34	and wide mouth).....													
	STOCKS, END OF MONTH³ (Thousands of gross)													
	All types.....	(X)	45,424	48,830	49,429	48,526	47,820	45,531	45,101	43,875	43,384	44,499	46,700	45,930
	Narrow neck containers ²	(X)	32,090	34,402	34,269	33,567	32,699	30,599	29,733	30,149	29,810	30,587	31,947	31,413
	Wide mouth containers.....	(X)	13,334	14,428	15,160	14,959	15,121	14,932	15,368	13,726	13,574	13,912	14,753	14,517
	By end use:													
	Food:													
32210 11	Narrow neck.....	(X)	'4,023	'4,343	'4,468	'4,553	'4,415	'4,264	4,371	'4,572	'4,365	'4,420	4,714	4,804
32210 31,	Wide mouth, including dairy.....	(X)	13,334	14,428	15,160	14,959	15,121	14,932	15,368	13,726	13,574	13,912	14,753	14,517
37														
32210 19,	Beverages (refillable and nonrefillable).....	(X)	8,522	9,282	9,014	8,805	8,143	7,267	7,364	7,023	6,944	6,766	6,936	7,141
50														
32210 23,	Beer (refillable and nonrefillable).....	(X)	'9,071	'9,692	9,719	9,173	9,239	8,886	8,116	8,513	8,721	9,254	9,955	9,379
60														
32210 27	Liquor.....	(X)	2,904	3,245	3,254	3,141	3,106	2,826	2,862	2,934	2,960	3,122	3,083	2,927
32210 29	Wine.....	(X)	2,653	2,721	2,719	2,732	2,743	2,573	2,349	2,330	2,458	2,579	2,742	2,717
	Other (narrow neck and wide mouth):													
32210 13,	Medicinal and health supplies (narrow	(X)	3,185	3,343	3,238	3,356	3,318	3,114	2,964	3,128	2,828	2,815	2,836	2,798
32	neck and wide mouth).....													
32210 15,	Chemical, household, and industrial	(X)	427	495	452	387	345	'379	'383	'389	'362	'401	437	396
33	(narrow neck and wide mouth).....													
32210 17,	Toiletries and cosmetics (narrow neck	(X)	1,305	1,281	1,405	1,420	1,390	1,290	1,324	1,260	1,172	1,230	1,244	1,251
34	and wide mouth).....													

¹Revised by 5 percent or more from previously published figures.

(X) Not applicable.

²Weight is based on production of glass containers.³Includes data for wide mouth containers in the following categories: Medicinal and health; chemical, household, and industrial; and toiletries and cosmetics, to avoid disclosure of individual company data.⁴Figures are limited to inventories at manufacturing establishments. For some time, the sum of the inventories at the beginning of the month does not equal inventories at the end of the month. This is due to breakage and inventory adjustment.

Table 13. SHIPMENTS, PRODUCTION, AND STOCKS OF GLASS CONTAINERS: 1991

Product code	Product description	Total	January	February	March	April	May	June	July	August	September	October	November	December
	NET PACKED WEIGHT¹ (Thousands of pounds)													
	All types.....	21,116,426	1,750,516	1,705,202	1,814,830	1,818,955	1,884,028	1,767,063	1,869,701	1,875,849	1,674,877	1,898,758	1,737,816	1,318,831
	Narrow neck containers ²	15,446,512	1,305,003	1,235,476	1,331,202	1,302,335	1,385,462	1,326,158	1,371,704	1,380,724	1,237,375	1,383,796	1,243,423	943,854
	Wide mouth containers.....	5,669,914	445,513	469,726	483,628	516,620	498,566	440,905	497,997	495,125	437,502	514,962	494,393	374,977
	By end use:													
	Food:													
32210 11	Narrow neck.....	1,751,719	122,347	135,135	151,942	149,246	172,492	163,315	175,509	191,008	152,912	143,907	112,503	81,403
32210 31, 37	Wide mouth, including dairy.....	5,669,914	445,513	469,726	483,628	516,620	498,566	440,905	497,997	495,125	437,502	514,962	494,393	374,977
32210 19, 50	Beverages (refillable and nonrefillable).....	3,654,597	314,886	283,210	305,654	321,495	361,917	306,640	327,514	322,010	277,475	328,966	289,748	215,082
32210 23, 60	Beer (refillable and nonrefillable).....	5,990,557	528,781	491,913	515,459	492,657	495,022	503,667	530,021	531,561	493,020	537,890	477,963	392,603
32210 27	Liquor.....	1,480,879	128,611	122,720	133,794	118,957	129,147	126,186	131,333	119,704	114,893	136,159	128,476	90,899
32210 29	Wine.....	2,015,742	174,356	167,452	173,484	175,393	193,930	172,060	170,641	167,504	153,796	167,022	175,014	125,090
32210 13, 32	Other (narrow neck and wide mouth): Medicinal and health supplies (narrow neck and wide mouth).....	357,455	25,064	21,673	34,342	31,233	22,399	34,470	19,424	28,485	30,575	46,176	39,641	23,973
32210 15, 33	Chemical, household, and industrial (narrow neck and wide mouth).....	61,219	3,106	4,561	6,360	3,355	1,578	4,824	6,284	5,585	2,601	8,636	9,004	5,325
32210 17, 34	Toiletries and cosmetics (narrow neck and wide mouth).....	134,344	7,852	8,812	10,167	9,999	8,977	14,996	10,978	14,867	12,103	15,040	11,074	9,479
	SHIPMENTS (Thousands of gross)													
	All types.....	278,575	20,964	19,823	22,539	24,547	26,198	25,431	25,545	26,319	23,229	24,575	21,121	18,284
	Narrow neck containers.....	203,892	14,953	14,179	16,599	17,916	19,518	19,382	19,329	19,346	17,005	17,283	14,993	13,389
	Wide mouth containers.....	74,683	6,011	5,644	5,940	6,631	6,680	6,049	6,216	6,973	6,224	7,292	6,128	4,895
	By end use:													
	Food:													
32210 11	Narrow neck.....	23,477	1,538	1,724	2,087	2,164	2,356	2,245	2,268	2,469	2,174	1,870	1,380	1,202
32210 31, 37	Wide mouth, including dairy.....	74,683	6,011	5,644	5,940	6,631	6,680	6,049	6,216	6,973	6,224	7,292	6,128	4,895
32210 19, 50	Beverages (refillable and nonrefillable).....	57,141	3,987	3,750	4,591	5,303	5,822	5,663	5,623	5,439	4,722	4,686	3,845	3,710
32210 23, 60	Beer (refillable and nonrefillable).....	84,304	6,855	6,223	6,936	6,955	7,638	7,702	8,138	7,736	6,816	7,133	6,511	5,661
32210 27	Liquor.....	10,565	736	727	850	992	957	909	860	883	902	1,051	884	814
32210 29	Wine.....	13,473	1,016	926	1,207	1,357	1,409	1,304	1,242	1,241	983	982	947	859
32210 13, 32	Other (narrow neck and wide mouth): Medicinal and health supplies (narrow neck and wide mouth).....	8,872	517	519	618	702	780	830	620	853	855	956	925	697
32210 15, 33	Chemical, household, and industrial (narrow neck and wide mouth).....	1,198	72	59	71	78	96	109	130	153	121	136	95	78
32210 17, 34	Toiletries and cosmetics (narrow neck and wide mouth).....	4,882	232	251	239	365	460	620	448	572	432	469	406	368

See Instructions at end of table.

Table 13. SHIPMENTS, PRODUCTION, AND STOCKS OF GLASS CONTAINERS: 1991—Continued

Product code	Product description	Total	January	February	March	April	May	June	July	August	September	October	November	December
	PRODUCTION (Thousands of gross)													
	All types.....	282,048	22,441	22,341	24,194	24,371	25,306	24,428	25,175	25,576	22,298	25,409	22,976	17,533
	Narrow neck containers ²	207,944	16,908	16,473	17,940	17,461	18,598	18,451	18,524	18,988	16,725	18,548	16,564	12,764
	Wide mouth containers.....	74,104	5,533	5,868	6,254	6,910	6,708	5,977	6,651	6,588	5,573	6,861	6,412	4,769
	By end use:													
	Food:													
32210 11	Narrow neck.....	24,641	1,608	1,832	2,137	2,097	2,283	2,326	2,600	2,524	2,202	2,059	1,675	1,298
32210 31, 37	Wide mouth, including dairy.....	74,104	5,533	5,868	6,254	6,910	6,708	5,977	6,651	6,588	5,573	6,861	6,412	4,769
32210 19, 50	Beverages (refillable and nonrefillable).....	57,119	4,939	4,467	4,781	5,008	5,682	4,813	5,115	5,021	4,336	5,167	4,508	3,282
32210 23, 60	Beer (refillable and nonrefillable).....	84,601	7,299	7,057	7,390	6,857	6,982	7,174	7,403	7,675	6,937	7,501	6,788	5,538
32210 27	Liquor.....	11,261	1,003	971	998	935	998	1,051	1,004	910	797	996	944	654
32210 29	Wine.....	13,906	1,206	1,213	1,359	1,333	1,426	1,289	1,193	1,111	917	996	1,049	814
32210 13, 32	Other (narrow neck and wide mouth): Medicinal and health supplies (narrow neck and wide mouth).....	10,140	563	600	876	773	720	1,014	629	984	977	1,190	1,071	743
32210 15, 33	Chemical, household, and industrial (narrow neck and wide mouth).....	1,246	48	63	97	73	71	122	140	157	128	154	120	73
32210 17, 34	Toiletries and cosmetics (narrow neck and wide mouth).....	5,030	242	270	302	385	436	662	440	606	431	485	409	362
	STOCKS, END OF MONTH³ (Thousands of gross)													
	All types.....	(X)	44,817	47,192	48,551	48,201	47,049	46,089	45,455	44,522	43,501	44,119	45,655	44,076
	Narrow neck containers ²	(X)	32,181	34,568	35,852	34,945	33,964	32,910	31,729	31,189	30,817	31,284	32,235	30,736
	Wide mouth containers.....	(X)	12,636	12,624	12,699	13,256	13,085	13,179	13,726	13,333	12,684	12,835	13,420	13,340
	By end use:													
	Food:													
32210 11	Narrow neck.....	(X)	3,661	3,984	4,195	3,837	4,009	4,122	4,405	4,409	4,391	3,957	3,919	3,753
32210 31, 37	Wide mouth, including dairy.....	(X)	12,636	12,624	12,699	13,256	13,085	13,179	13,726	13,333	12,684	12,835	13,420	13,340
32210 19, 50	Beverages (refillable and nonrefillable).....	(X)	8,700	9,403	9,562	9,237	9,037	8,132	7,560	7,258	6,998	7,716	8,354	7,737
32210 23, 60	Beer (refillable and nonrefillable).....	(X)	10,345	11,148	11,478	11,265	10,381	9,767	8,722	8,585	8,657	8,928	9,144	8,787
32210 27	Liquor.....	(X)	2,609	2,845	2,986	2,938	2,961	3,048	3,214	3,181	3,066	2,977	3,021	2,820
32210 29	Wine.....	(X)	2,092	2,351	2,526	2,561	2,675	2,755	2,774	2,657	2,633	2,604	2,696	2,656
32210 13, 32	Other (narrow neck and wide mouth): Medicinal and health supplies (narrow neck and wide mouth).....	(X)	2,959	2,924	3,189	3,297	3,153	3,197	3,116	3,235	3,322	3,326	3,426	3,257
32210 15, 33	Chemical, household, and industrial (narrow neck and wide mouth).....	(X)	401	423	425	393	372	401	424	414	376	420	393	388
32210 17, 34	Toiletries and cosmetics (narrow neck and wide mouth).....	(X)	1,414	1,490	1,491	1,417	1,376	1,488	1,514	1,450	1,374	1,356	1,282	1,338

¹Revised by 5 percent or more from previously published figures.

(X) Not applicable.

²Weight is based on production of glass containers.³Includes data for wide mouth containers in the following categories: Medicinal and health; chemical, household, and industrial; and toiletries and cosmetics, to avoid disclosure of individual company data.⁴Figures are limited to inventories at manufacturing establishments. For some time, the sum of the inventories at the beginning of the month does not equal inventories at the end of the month. This is due to breakage and inventory adjustment.

HISTORICAL NOTES

Data on glass containers have been collected by the Bureau of the Census since 1945. Historical data may be obtained from the Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

FUNDING

For several years, monthly data on glass containers have been collected under the sponsorship of the Glass Packaging Institute.

CONTACT FOR DATA USERS

For additional information about these data, contact Al Foreman, 301-763-5531 or John Miller, 301-763-7837.

Chapter 6. Primary Metals

6.1 IRON AND STEEL CASTINGS

INTRODUCTION

These data cover producers of ferrous castings, whether for commercial sale or for use by the producing company. The statistics originate from the annual data for 1992 collected on Bureau of the Census Form MA33A, Iron and Steel Foundries. The annual survey panel consists of approximately 590 selected establishments, taken from a list of about 1,440 producers from the 1987 Census of Manufacturing universe.

The panel for this survey was selected using a cutoff sampling methodology from a frame that was constructed from the 1987 Census of Manufactures. The sampling frame consisted of all establishments in the census that satisfied at least one of the following criteria:

1. Shipments of castings were reported, or
2. Consumption of materials commonly used in the manufacture of castings was reported, or
3. Foundry activity was indicated by the completion of a special census inquiry.

For sampling purposes, a number of item codes, roughly equivalent to the items collected on the annual survey form, were created from the census product class and materials consumed codes defined by the above criteria. In some cases, the relationship between the item code and a corresponding census code was one to one. In other cases, the item code consisted of a combination of census codes. In either of these cases, a value was assigned to the item code at the establishment level to the corresponding summed values (quantities) of the census codes comprising it. Potentially, a given establishment might have had a multiple number of item codes assigned.

Each individual item code was sampled independently by cutoff methods, by first arraying the establishments with the item in descending order of value and by selecting the largest establishment, which in the cumulative accounted for 85 percent of the total item value. Because of the potential for establishments to be coded to more than one

item code, the effective coverage of all item codes exceeded 85 percent. Plants selected because of their size in one code contributed to the coverage in other codes for which they had a small amount of data.

The select cases constitute the mailing panel for the annual survey. For a given survey year, final estimates are formed for a given item by summing the data obtained for the mail panel and adjusting it by the coverage rate for the item, so that a complete coverage estimate is obtained. This methodology presumes that the nonmail cases exhibit the same growth characteristics as the mail cases.

SUMMARY OF FINDINGS

In 1992, the total ferrous castings shipments were 9.1 million short tons, a 5-percent increase from the 8.7 million short tons shipped in 1991.

The shipments of ductile iron castings in 1992 were 3.1 million short tons, a 10-percent increase from the 2.8 million shipped in 1991. Gray iron castings increased 4 percent from 4.6 million short tons in 1991 to 4.8 million short tons in 1992. Shipments of malleable castings decreased 2 percent from the 262 thousand short tons in 1991 to 258 short tons shipped in 1992. Steel castings increased 3 percent from 957 thousand short tons in 1991 to 988 thousand short tons in 1992. Steel investment castings decreased by 1 percent in 1992 to 71.0 million pounds from 71.8 million pounds in 1991.

EXPLANATION OF TERMS

Shipments for Sale. Represents commercial sales only (castings shipped to the trade). Intra-company sales are not included in this category.

Shipments for Own Use. Represents castings shipped for use by the reporting company or by a subsidiary, parent, or other affiliated company. Castings produced and consumed at the same location in the production of finished products are also included.

All Other Gray Iron Castings. Includes abrasives, rolls, chilled iron railroad car wheels, grinding balls, white iron castings, semisteel castings, and pressure and soil pipe fittings that require machining, threading, or assembling.

Cast Iron Pressure Pipe and Fittings. Includes those fittings that do not require machining, threading, or assembling.

Pearlitic Malleable. This classification is reported pursuant to ASTM (American Society for Testing Materials) Designation A220-76.

Alloy Steel. Steel that contains alloying elements in excess of the maximum standard ranges of the American Iron and Steel Institute as follows:

Manganese..... in excess of 1.65%
Silicon..... in excess of .60%
Copper..... in excess of .60%
Chromium..... up to 3.99%

Aluminum, chromium, cobalt, niobium molybdenum, nickel, titanium tungsten, vanadium, zirconium, or any other alloying element. } Any amount specified or known to have been added to obtain a desired alloying effect.

High Alloy Steel Castings. Heat and/or corrosion resistant steel castings containing 8 percent or more of chromium or nickel or both, with or without molybdenum or other elements.

Table 1. **QUANTITY OF SHIPMENTS OF IRON AND STEEL CASTINGS: 1988 TO 1992**

[Thousands of short tons]

Year	Ductile iron castings			Gray iron castings			Malleable iron castings			Steel castings		
	Total	For sale	For own use	Total	For sale	For own use	Total	For sale	For own use	Total	For sale	For own use
1992.....	3,061	2,624	437	4,771	3,311	1,460	258	128	130	988	894	94
1991.....	2,789	2,358	431	¹ 4,609	3,139	¹ 1,470	262	139	123	957	¹ 864	93
1990.....	3,186	2,719	467	5,073	3,551	1,522	290	169	121	1,133	1,031	102
1989.....	3,321	2,854	467	5,638	3,902	1,736	299	146	153	1,184	1,081	103
1988.....	3,210	2,688	522	5,941	4,053	1,888	323	162	161	1,187	1,073	114

¹Revised by 5 percent or more from previously published figures.

Table 2. **VALUE OF SHIPMENTS OF IRON AND STEEL CASTINGS: 1992 AND 1991**

[Millions of dollars]

Product description	1992	1991
Ductile iron castings	2,192.9	2,024.3
Gray iron castings	3,185.4	2,957.7
Malleable iron castings.....	255.0	277.2
Steel castings.....	1,621.0	¹ 1,698.0
Steel investment castings	2,470.9	¹ 1,946.5

Note: Dollar value represents the value of castings for sale.

¹Revised by 5 percent or more from previously published figures.

Table 3. SHIPMENTS OF IRON AND STEEL CASTINGS, BY TYPE OF CASTINGS: 1992 AND 1991

[In short tons]

Product code	Product description	Number of companies	1992	1991
	Iron and steel castings (except investment castings).....	(NA)	9,077,843	8,615,959
	For sale	(NA)	6,956,698	6,498,771
	For own use	(NA)	2,121,145	2,117,188
	Ductile (nodular) iron castings	196	3,060,954	2,788,698
	For sale	192	2,624,193	2,357,441
	For own use	34	436,761	431,257
	Ductile iron pressure pipe: ¹			
33211 32	Under 14 inches (inside diameter)	10	1,039,640	960,323
33211 34	14 inches and over (inside diameter)	6	412,460	351,103
	Ductile iron fittings:			
33211 36	Under 14 inches (inside diameter)	19	60,749	55,641
33211 38	14 inches and over (inside diameter)	8	21,305	21,092
33212 22	Automotive uses	45	748,648	626,639
33212 24	Construction and utility castings	25	10,300	9,957
33212 33	Machinery uses	84	141,314	161,464
33212 79	Other ductile iron castings (except pressure pipe and fittings) ²			
	For sale	131	481,873	452,779
	For own use	32	144,665	149,700
	Gray iron castings	280	4,770,383	4,608,258
	For sale	280	3,309,925	3,138,115
	For own use	55	1,460,458	1,470,143
33216 00	Molds and stools for heavy steel ingots	8	310,069	332,647
	Gray iron pressure pipe fittings ¹			
33217 44	Under 14 inches (inside diameter)	17	45,713	41,127
33217 45	14 inches and over (inside diameter)	7	3,218	7,183
33218 00	Gray iron soil pipe ¹	6	234,716	254,890
33218 04	Gray iron soil pipe fittings ¹	7	37,594	38,696
33219 39	Automotive uses	55	1,955,122	1,606,835
33219 41	Construction and utility castings	55	325,066	310,814
33219 97	Other gray iron castings, including white iron castings:			
	For sale	234	1,503,539	1,626,585
	For own use	53	355,346	389,481
	Malleable iron castings	23	258,461	261,808
	For sale	23	128,178	138,701
	For own use	5	130,283	123,107
33221 00	Standard malleable	20	154,305	162,946
33222 00	Pearlitic malleable	15	104,156	98,862
	Steel castings (except investment)	134	988,045	957,195
	For sale	134	894,402	864,514
	For own use	39	93,643	92,681
	Carbon steel	85	560,789	530,410
	Railroad specialties	22	406,217	378,032
33252 02	Side frames, bolsters, couplers, yokes, draft gear, snubbers (self-contained unit type), hopper doors and frames, and break beams	12	136,638	126,038
33252 29	Other carbon steel railway and transit rolling stock castings	18	269,579	251,994
33252 39	Other carbon steel castings, including rolls for rolling mills:			
	For sale	86	146,727	143,727
	For own use	20	7,845	8,651
33255 51	Alloy (except high alloy) steel castings	59	324,292	328,899
33255 57	Railway specialties	16	29,529	31,485
33254 00	Other alloy steel castings, including rolls for rolling mills	55	294,763	297,414
	High alloy steel castings:			
	For sale	82	94,842	89,747
	For own use	14	8,122	8,139
	Steel investment castings ³	63	71,032	71,813
	For sale ³	63	66,396	67,232
	For own use ³	7	4,636	4,581
33240 63	Carbon, including low alloy ³	48	20,133	20,450
33240 68	Alloy, including stainless ³	62	50,899	51,363

¹Revised by 5 percent or more from previously published figures. (NA) Not available.

²Does not include machined, threaded, or assembled fittings.

³Compacted graphite is included with "Other ductile iron castings."

⁴Shipments are in thousands of pounds.

Table 4. **MANUFACTURERS' SHIPMENTS, EXPORTS, AND IMPORTS OF IRON AND STEEL CASTINGS: 1992 AND 1991**

[Quantity in thousand short tons]

Product code	Product description ¹	Manufacturers' shipments	Exports of domestic merchandise ^{1 2}	Imports for consumption ^{3 4}
1992				
33211 32, 34, 36, 38, 33217 44, 45	Ductile and gray iron pressure pipe and fittings.....	1,583	73	121
33212 22, 24, 33, 79, 33219 39, 41, 97	Other ductile iron castings	5,666	8	212
33216 00	Molds and stools for heavy steel ingot	310	35	(Z)
33218 00, 04	Gray iron soil pipe and fittings.....	273	146	126
33221 00, 33222 00	Malleable iron castings	258	17	17
33252 16, 29, 39, 33254 00, 33255 51, 57	Steel castings, except investments	990	87	15
1991				
33211 32, 34, 36, 38, 33217 44, 45	Ductile and gray iron pressure pipe and fittings.....	1,436	60	71
33212 22, 24, 33, 79, 33219 39, 41, 97	Other ductile iron castings	5,335	8	160
33216 00	Molds and stools for heavy steel ingot	333	11	1
33218 00, 04	Gray iron soil pipe and fittings.....	294	181	184
33221 00, 33222 00	Malleable iron castings	262	17	15
33252 16, 29, 39, 33254 00, 33255 51, 57	Steel castings, except investments	957	20	20

(Z) Less than 500 tons.

¹For comparison of SIC codes with Schedule B export numbers, and import numbers see appendix B.²Source: Bureau of the Census report FT 446, *Exports*.³Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.⁴"Apparent consumption" is derived by subtracting "Exports" from the total of "Manufacturers' shipments," plus "Imports."**HISTORICAL NOTE**

Data on iron and steel castings have been collected by the Bureau of the Census since 1943. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Renee Reda, 301-763-7865 or Mary W. Ellickson, 301-763-7862.

6.2 STEEL MILL PRODUCTS

INTRODUCTION

These data cover all known producers of steel mill products. The statistics were collected by mail on Bureau of the Census annual Form MA33B, Steel Mill Products. The survey panel includes all known producers of steel mill products, approximately 382 companies.

SUMMARY OF FINDINGS

Net shipments of steel mill producers during 1992 totaled 83.7 million **metric** tons, a 5-percent increase from the 79.8 million **metric** tons shipped in 1991.

EXPLANATION OF TERMS

Net Shipments. This figure is derived by subtracting the steel mills' domestic receipts for each steel mill shape from the total of shipments to other companies, transfers to other plants, and tonnage consumed in steel mills in the production of fabricated products and as maintenance, repair, and operating supplies. Prior to 1980, import receipts were also used in the net shipments calculation. Beginning in 1980, import receipts of steel mill products for further processing were collected separately and were no longer used in the net shipments calculation.

Carbon Steel. Steel is considered to be carbon steel when no minimum content is specified or required for aluminum (except for deoxidation and/or grain size control), chromium, cobalt, niobium, molybdenum, nickel, titanium, tungsten, vanadium, zirconium, or any other element added to obtain a desired alloying effect. In addition, the specified minimum for copper must not exceed 0.40 percent, or when the maximum content specified for any of

the following elements must not exceed the percentages noted: manganese, 1.65; silicon, 0.60; copper, 0.60; boron may be added to carbon steels to improve their ability to harden.

In all carbon steels, small quantities of certain residual elements, such as copper, nickel, molybdenum, and chromium, are unavoidably retained from raw materials. Those elements are considered as incidental.

Alloy Steel. Steel, including high-strength alloy steel, that contains alloying elements in excess of maximum standard ranges of the American Iron and Steel Institute, as follows:

- Manganesein excess of 1.65%
- Silicon in excess of 0.60%
- Copper..... in excess of 0.60%
- Chromiumup to 3.99%

Aluminum, cobalt
molybdenum, nickel
titanium, tungsten,
vanadium, zirconium,
or any other alloying
element

}

Any amount
specified or
known to have been
added to obtain
a desirable
alloying effect

Stainless Steel. Any of several steels containing 10 percent or more chromium as the principal alloying element. Stainless steel usually exhibits passivity in aqueous environments.

Heat Resisting Steel. Includes all grades of steel containing at least 4.0 percent, but less than 10 percent chromium, when intended for heat resisting applications. Heat resisting steel is reported under stainless steel.

Table 5. **VALUE OF SHIPMENTS OF STEEL MILL PRODUCTS, BY CLASS OF PRODUCTS: 1987 TO 1992**

[Value in thousands of dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987
	Total	50,370,815	50,662,849	56,309,703	57,817,691	59,942,020	47,276,713
33122	Steel ingot and semifinished shapes	3,257,372	3,631,923	3,809,753	4,210,738	4,417,705	3,416,600
33123	Hot rolled sheet and strip, including tin mill products ¹	17,337,139	16,936,408	18,774,861	19,896,024	20,897,100	16,188,072
33124	Hot rolled bars and shapes, plates, structural shapes, and piling	8,993,364	9,407,166	11,152,996	10,672,076	11,290,118	8,757,570
33155	Steel wire	1,875,165	1,855,641	1,955,873	1,937,630	1,863,031	1,546,826
3315-	Other wire products	1,490,448	¹ 1,666,042	1,523,532	1,626,444	1,467,103	1,323,686
33170	Steel pipe and tube ²	6,010,627	6,480,766	7,067,239	6,637,784	7,007,171	5,355,615
33167	Cold rolled steel sheet and strip ¹	9,357,479	8,763,633	9,820,759	10,551,788	10,766,862	8,847,474
33168	Cold finished steel bars and bar shapes	1,671,588	1,586,208	1,868,804	1,919,048	1,884,263	1,551,799
3312C	Other steel mill products, except wire products	377,633	335,062	335,886	366,159	348,667	289,071

¹Revised by 5 percent or more from previously published figures.¹Galvanized, metallic coated, and electrical cold rolled sheet and strip are included in product class 33123, "Hot rolled sheet and strip."²Product code 33170, revised per 1987 Census of Manufactures, was previously published as 33176.Table 6. **PRODUCTION OF RAW STEEL: 1992 AND 1991**

[Thousands of metric tons]

Product description	1992	1991
Total	83,733	79,809
By grade of steel:		
Carbon	73,735	70,244
Alloy	8,108	7,847
Stainless	1,890	1,718
By type of furnace:		
Open hearth	1,627	2,184
Electric	29,940	28,876
Basic oxygen and other types of furnace	52,166	48,748

Table 7. RECEIPTS, CONSUMPTION, SHIPMENTS, AND NET SHIPMENTS OF STEEL MILL PRODUCTS: 1992

[Quantity in metric tons; value in thousands of dollars]

Product code ¹	Product description	Number of companies	Receipts ^{2 3} (quantity)	Steel consumed in producing plants (quantity)	Total shipments		Net shipments (quantity)
					Quantity	Value f.o.b. plant	
	Steel	(NA)	22,373,395	9,835,847	94,039,678	50,370,815	81,502,129
	Carbon steel	296	20,263,185	9,465,796	85,311,688	40,538,716	74,514,299
33122 11	Ingots	8	(D)	(D)	221,237	62,222	271,372
	Semifinished products:						
33122 13	Blooms, billets, sheet bars, tin mill bars, tube rounds, and skelp	36	1,697,059	2,033,244	1,825,750	541,172	2,161,935
33122 19	Wire rods	23	2,415,513	1,414,230	3,687,763	1,306,337	2,686,480
33122 20	Slabs	11	(D)	(D)	1,698,832	392,085	331,016
	Finished products:						
33124 13	Plates - cut lengths ⁴	14	(D)	(D)	3,697,745	1,661,395	3,713,369
33124 14	Plates in coils	4	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
	Sheets:						
33123 11	Hot rolled, including hot rolled bands	30	9,468,177	2,672,691	19,021,692	6,470,679	12,226,206
33167 11	Cold rolled	25	1,170,685	550,430	12,526,109	5,928,205	11,905,854
	Sheets and strip:						
	Galvanized:						
33123 13	Hot dipped	21	(D)	(D)	6,664,599	4,182,434	6,636,696
33123 15	Electrolytic	12	8,328	2,756	1,549,810	1,077,889	1,544,238
33123 17	Electrical	5	(D)	(D)	415,529	274,832	415,492
33123 18	All other metallic coated, including long ternes	11	(D)	(D)	825,747	579,284	816,536
	Strip:						
33123 19	Hot rolled	17	387,697	427,681	986,105	354,668	1,026,089
33167 15	Cold rolled	24	223,545	92,386	1,169,898	843,023	1,038,740
	Tin mill products:						
33123 24	Black plate	9	(D)	(D)	321,069	181,574	314,778
33123 26	Electrolytic and hot dipped tin plate	8	(D)	(D)	2,574,036	1,822,356	2,545,920
33123 28	Tin free steel	4	(D)	(D)	224,346	145,183	224,346
33123 29	All other tin mill products, including short ternes and foil	8	-	-	537,188	368,838	537,188
	Structural shapes (heavy):						
33124 15	Wide flange	4	(D)	(D)	1,448,534	580,840	1,449,438
33124 17	Standard heavy shapes	5	(D)	(D)	1,866,482	688,276	1,866,488
33124 18	Sheet piling and bearing piles	3	(D)	(D)	366,137	144,330	361,240
	Bars:						
33124 22	Hot rolled bars (except concrete reinforcing)	39	925,967	81,482	6,328,940	2,247,517	5,484,455
33124 24	Light structurals (under 3 inches) ..	9	(D)	(D)	1,072,542	370,068	1,072,252
33124 26	Concrete reinforcing bars	22	(D)	(D)	4,228,692	1,170,977	4,233,096
33168 11	Cold finished bars	33	(D)	(D)	1,190,811	938,996	1,033,243
3312C —	Rails, wheels, and track accessories ⁵	14	145,909	130,560	615,007	377,633	599,657
	Pipe and tubes: ⁶						
	Line pipe:						
33170 14	16 inches od and under	20	(D)	(D)	995,058	558,346	978,762
33170 15	Over 16 inches od	5	-	-	403,364	290,113	403,364
33170 19	Oil country goods	12	(D)	(D)	642,927	380,491	568,274
	Pressure tubing:						
33170 21	Seamless	7	(D)	(D)	68,704	92,163	61,050
33170 22	Welded	15	(D)	(D)	283,289	289,114	284,133
	Mechanical tubing:						
33170 23	Seamless	14	(D)	(D)	80,136	91,144	79,146
33170 24	Welded	51	74,159	17,864	1,483,015	1,423,643	1,426,720
33170 27	Structurals	21	(D)	(D)	801,638	445,466	801,153
33170 29	Miscellaneous, including standard pipe	23	(D)	(D)	1,794,400	1,235,836	1,785,480
	Wire:						
	Plain wire:						
33155 01	Flat wire	10	(D)	(D)	62,015	51,919	34,725
	Round wire:						
	Thermally treated:						
33155 02	Under 1.5 mm in diameter ..	13	42,597	16,085	34,814	36,577	8,302
33155 03	1.5 mm or above	24	48,827	24,102	220,621	175,679	195,895

See footnotes at end of table.

Table 7. RECEIPTS, CONSUMPTION, SHIPMENTS, AND NET SHIPMENTS OF STEEL MILL PRODUCTS: 1992—Continued

[Quantity in metric tons; value in thousands of dollars]

Product code ¹	Product description	Number of companies	Receipts ^{2 3} (quantity)	Steel consumed in producing plants (quantity)	Total shipments		Net shipments (quantity)
					Quantity	Value f.o.b. plant	
	Steel—Cont.						
	Carbon steel—Cont.						
	Finished products—Cont.						
	Wire—Cont.						
	Plain wire—Cont.						
	Round wire—Cont.						
	Other round wire:						
33155 04	Under 1.5 mm in diameter ..	12	(D)	(D)	150,334	95,992	170,103
33155 05	1.5 mm or above.....	42	182,029	249,127	1,047,076	571,282	1,114,174
33155 06	Other shape wire.....	7	(D)	(D)	(D)	(D)	(D)
	Plated or coated with zinc:						
	Round wire:						
33155 13	Under 1.5 mm in diameter	11	18,953	17,730	62,243	61,096	61,020
33155 14	1.5mm or larger in diameter ⁷	25	105,620	21,402	336,407	217,114	252,190
33155 15	Other shape wire, including flat	7	(⁷)	(⁷)	(⁷)	(⁷)	(⁷)
	Other coated wire:						
33155 17	Flat wire	5	(D)	(D)	(D)	(D)	(D)
33155 18	Round wire	14	(D)	(D)	34,643	40,324	36,629
33155 21	Other shape wire.....	6	(D)	(D)	24,243	63,743	24,217
	Wire products: ⁸						
33152 21	Nails and staples	17	(D)	(D)	451,398	485,795	460,325
33159 51	Barbed and twisted wire	6	(D)	(D)	57,980	49,446	57,956
33156 21	Wire fence, woven and welded	12	(D)	(D)	255,265	203,171	263,119
33159 55	Bale ties	5	-	-	16,291	11,002	16,291
33151 11	Wire rope and cable.....	12	(D)	(D)	125,182	246,489	125,449
	Wire strand:						
33151 33	For prestressed concrete	7	(D)	(D)	316,862	196,901	313,083
33151 35	Other	13	-	-	170,036	227,440	170,036
33157 71	Woven wire netting.....	7	(D)	(D)	80,927	70,204	79,972
	Alloy steel.....	89	1,294,568	244,941	6,409,749	4,369,291	5,360,122
33122 31	Ingots	12	(D)	(D)	69,667	54,072	146,225
	Semifinished products:						
33122 36	Blooms, billets, sheet bars, rounds, and skelp ⁹	16	763,819	82,282	1,047,712	550,729	366,175
33122 39	Wire rods	7	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
33122 41	Slabs	6	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
	Finished products:						
33124 33	Plates - cut lengths ¹⁰	9	11,634	12,549	555,262	376,012	556,176
33124 36	Plates in coils.....	2	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
33124 38	Structural shapes (3 inches and under)	3	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
	Sheet:						
33123 31	Hot rolled	10	(D)	(D)	1,177,296	512,424	1,171,195
33167 31	Cold rolled	11	(D)	(D)	216,982	148,646	216,135
	Sheets and strip:						
	Galvanized:						
33123 35	Hot dipped	4	-	-	167,453	116,815	167,453
33123 37	All other metallic coated, including electrolytic	6	(D)	(D)	171,311	212,856	171,112
	Strip:						
33123 39	Hot rolled	4	(D)	(D)	27,501	13,594	15,892
33167 35	Cold finished	12	(D)	(D)	233,308	304,300	228,865
	Bars:						
33124 41	Hot rolled, including structural shapes under 3 inches	18	(D)	(D)	1,694,036	934,969	1,445,828
33168 31	Cold finished	21	(D)	(D)	382,764	294,422	312,839
	Tool steel:						
33124 48	High speed.....	8	(D)	(D)	12,174	92,743	11,944
33124 49	Other than high speed.....	6	(D)	(D)	44,455	121,538	44,011
	Pipe and tubes:						
33170 32	Oil country goods and line pipe ..	7	(D)	(D)	330,309	233,113	318,168
33170 43	Pressure tubing	9	(D)	(D)	20,619	63,095	20,059
33170 45	Mechanical tubing ¹¹	9	89,228	784	206,924	271,379	118,480
33170 48	Miscellaneous, including standard and structural	3	(¹¹)	(¹¹)	(¹¹)	(¹¹)	(¹¹)
33155 37	Wire (plain and coated)	13	(D)	(D)	51,976	68,584	49,563

See footnotes at end of table.

Table 7. RECEIPTS, CONSUMPTION, SHIPMENTS, AND NET SHIPMENTS OF STEEL MILL PRODUCTS: 1992—Continued

[Quantity in metric tons; value in thousands of dollars]

Product code ¹	Product description	Number of companies	Receipts ^{2 3} (quantity)	Steel consumed in producing plants (quantity)	Total shipments		Net shipments (quantity)
					Quantity	Value f.o.b. plant	
	Steel—Cont.						
33122 51	Stainless steel	88	815,642	125,110	2,318,241	5,462,808	1,627,709
	Ingots	8	(D)	(D)	11,055	26,437	15,723
33122 56	Semifinished products:						
	Blooms, billets, slabs, sheet bars, tube rounds, and skelp	11	(D)	(D)	213,912	258,931	119,924
33122 59	Wire rods	6	(D)	(D)	22,534	65,387	13,390
33124 53	Finished products:						
	Plates and structurals	9	(D)	(D)	150,224	439,636	146,643
33123 57	Sheets and strip:						
	Hot rolled	9	493,344	10,676	690,543	1,023,713	207,875
33167 57	Cold rolled	17	122,296	33,940	914,480	2,133,305	826,125
33124 61	Bars:						
	Hot rolled	8	(D)	(D)	44,870	165,063	43,757
33168 51	Cold finished	15	(D)	(D)	106,235	438,170	98,673
	Pipe and tubes:						
	Pressure tubing:						
33170 61	Seamless	7	(D)	(D)	11,293	84,498	10,536
33170 62	Welded	11	(D)	(D)	43,895	221,921	39,115
	Mechanical tubing:						
33170 63	Seamless	4	(D)	(D)	6,587	59,222	5,160
33170 64	Welded ¹²	19	(D)	(D)	50,649	271,083	50,175
33170 65	Other pipe and tube	2	(¹²)	(¹²)	(¹²)	(¹²)	(¹²)
	Wire:						
	Round wire:						
33155 52	Under 0.75 mm in diameter	11	(D)	(D)	5,124	42,888	4,450
33155 53	0.75 mm to under 1.5 mm in diameter	9	(D)	(D)	4,969	30,983	4,923
33155 54	1.5 mm and above	11	1,067	511	36,737	175,770	36,181
33155 57	Other shape wire, including flat wire	11	(D)	(D)	5,134	25,801	5,059

Note: Quantity data converted to metric tons; therefore, the detail may not add to total due to rounding.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. In some cases, figures which are otherwise publishable are withheld to avoid disclosing by subtraction from higher-level totals or from related figures. (NA) Not available.

¹Product codes in the 33155 series also include products in the 33125 series; the same applies for 33167 and 33127, 33168 and 33128, and 33170 and 33126.

²Excludes receipts and shipments of steel processed on a conversion basis for nonsteel producing companies. Receipts data represent receipts at producing mills only and include receipts from domestic sources.

³Import receipts of steel mill products for 1992 are as follows: total, 3,422,866 metric tons; carbon, 3,162,027 metric tons; alloy, 171,335 metric tons; stainless, 48,033 metric tons.

⁴The data for product codes 33124 13 and 33124 14 are combined to avoid disclosing figures for individual companies.

⁵Product code 3312C combines product codes 3312C 11, 3312C 13, 3312C 15, 3312C 17, 3312C 19, 3312C 21, and 3312C 23.

⁶See table 5, footnote 2.

⁷The data for product codes 33155 14 and 33155 15 are combined to avoid disclosing figures for individual companies.

⁸Represents wire products produced within steel works and wire drawing establishments. See the 1987 Census of Manufactures, MC87-I-33A, tables 6A-1, 6A-2, and 6A-3 for detailed information.

⁹The data for product codes 33122 36, 33122 39, and 33122 41 are combined to avoid disclosing figures for individual companies.

¹⁰The data for product codes 33124 33, 33124 36, and 33124 38 are combined to avoid disclosing figures for individual companies.

¹¹The data for product codes 33170 45 and 33170 48 are combined to avoid disclosing figures for individual companies.

¹²The data for product codes 33170 64 and 33170 65 are combined to avoid disclosing figures for individual companies.

Table 8. RECEIPTS, CONSUMPTION, SHIPMENTS, AND NET SHIPMENTS OF STEEL MILL PRODUCTS: 1991

[Quantity in metric tons; value in thousands of dollars]

Product code ¹	Product description	Number of companies	Receipts ^{2 3} (quantity)	Steel consumed in producing plants (quantity)	Total shipments		Net shipments (quantity)
					Quantity	Value f.o.b. plant	
	Steel	(NA)	21,293,073	'9,617,085	90,772,523	50,662,849	78,254,674
	Carbon steel	296	19,153,477	'9,261,261	81,445,119	40,054,436	70,719,522
33122 11	Ingots	8	'178,723	166,325	210,577	64,797	'198,179
	Semifinished products:						
33122 13	Blooms, billets, slabs, sheet bars, tin mill bars, tube rounds, and skelp.	44	3,600,319	'3,443,335	3,461,560	931,453	'3,304,577
33122 19	Wire rods	24	2,316,591	1,205,400	3,940,010	1,403,649	2,828,820
	Finished products:						
33124 12	Plates	20	(D)	(D)	4,048,433	1,955,369	4,058,415
	Sheets:						
33123 11	Hot rolled, including hot rolled bands.	26	8,514,451	1,994,126	19,326,350	6,592,429	12,806,026
33167 11	Cold rolled	21	1,556,494	524,263	11,102,099	5,430,088	10,069,868
	Sheets and strip:						
	Galvanized:						
33123 13	Hot dipped	22	(D)	(D)	5,817,050	3,726,892	5,804,935
33123 15	Electrolytic	14	'5,482	1,171	1,478,883	1,057,720	1,474,572
33123 16	All other metallic coated, including long ternes and electrical	11	11,023	3,442	1,076,616	717,514	1,069,036
	Strip:						
33123 19	Hot rolled	17	(D)	(D)	'856,889	'310,970	'871,354
33167 15	Cold rolled	27	196,270	70,568	'1,135,277	'835,470	'1,009,575
	Tin mill products:						
33123 24	Black plate	9	(D)	(D)	311,992	182,114	305,984
33123 26	Electrolytic and hot dipped tin plate.	9	(D)	(D)	2,591,184	1,843,893	2,553,711
33123 27	All other tin mill products, including tin-free steel, short ternes, and foil	8	(D)	(D)	795,487	545,082	788,739
33124 16	Structural shapes (heavy)	12	(D)	(D)	2,898,456	1,145,441	2,899,779
33124 18	Sheet piling and bearing piles	7	(D)	(D)	334,711	141,304	330,409
	Bars:						
33124 22	Hot rolled bars (except concrete reinforcing)	38	659,704	83,348	4,977,683	2,111,309	4,401,327
33124 24	Light structurals (under 3 inches) ..	12	(D)	(D)	1,165,836	408,237	1,166,897
33124 26	Concrete reinforcing bars	22	(D)	(D)	4,522,110	1,342,649	4,553,995
33168 11	Cold finished bars	35	(D)	(D)	1,092,284	847,340	954,836
3312C —	Rails, wheels, and track accessories ⁴	14	85,137	96,059	543,605	335,062	554,526
	Pipe and tubes: ⁵						
	Line pipe:						
33170 14	16 inches od and under.	20	(D)	(D)	945,519	573,147	933,265
33170 15	Over 16 inches od	5	-	-	608,912	469,166	608,912
33170 19	Oil country goods	12	(D)	(D)	707,413	484,322	618,770
	Pressure tubing:						
33170 21	Seamless	7	(D)	(D)	68,494	94,428	53,197
33170 22	Welded	13	(D)	(D)	155,233	221,561	155,323
	Mechanical tubing:						
33170 23	Seamless	15	(D)	(D)	88,093	99,507	86,758
33170 24	Welded	58	70,701	38,108	1,966,249	1,670,561	1,933,656
33170 27	Structurals	21	(D)	(D)	765,204	454,102	764,389
33170 29	Miscellaneous, including standard pipe	28	45,341	5,045	1,212,674	911,798	1,172,378
	Wire:						
	Plain wire:						
33155 01	Flat wire	15	(D)	(D)	'139,255	'96,707	'104,850
	Round wire:						
	Thermally treated:						
33155 02	Under 1.5 mm in diameter ..	10	35,335	11,644	38,596	39,452	14,905
33155 03	1.5 mm or above.	22	47,250	12,054	'179,552	'143,587	'144,356
	Other round wire:						
33155 04	Under 1.5 mm in diameter ..	14	(D)	(D)	'142,151	'92,668	186,594
33155 05	1.5 mm or above.	39	190,900	292,003	'874,395	498,634	'975,498
33155 06	Other shape wire.	10	(D)	(D)	211,996	88,913	211,172
	Plated or coated with zinc:						
33155 12	Flat wire	9	(D)	(D)	55,757	41,797	'36,519

See footnotes at end of table.

Table 8. RECEIPTS, CONSUMPTION, SHIPMENTS, AND NET SHIPMENTS OF STEEL MILL PRODUCTS: 1991—Continued

[Quantity in metric tons; value in thousands of dollars]

Product code ¹	Product description	Number of companies	Receipts ^{2 3} (quantity)	Steel consumed in producing plants (quantity)	Total shipments		Net shipments (quantity)
					Quantity	Value f.o.b. plant	
	Steel—Cont.						
	Carbon steel—Cont.						
	Finished products—Cont.						
	Plated or coated with zinc—Cont.						
	Round wire:						
33155 13	Under 1.5 mm in diameter	9	18,673	16,845	59,655	63,468	57,828
33155 14	1.5mm or larger in diameter ⁶	22	79,643	19,244	239,792	163,293	179,393
33155 16	Other shape wire	3	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)
	Other coated wire:						
33155 17	Flat wire	6	(D)	(D)	19,843	110,437	17,643
33155 18	Round wire	18	(D)	(D)	61,416	69,507	54,887
33155 21	Other shape wire	10	(D)	(D)	50,744	72,557	50,768
	Wire products: ⁷						
33152 21	Nails and staples	24	(D)	(D)	504,689	537,998	522,000
33159 51	Barbed and twisted wire	8	(D)	(D)	47,605	42,111	47,564
33156 21	Wire fence, woven and welded	15	(D)	(D)	237,145	186,567	240,319
33159 55	Bale ties	7	-	-	41,565	28,047	41,565
33151 11	Wire rope and cable	12	(D)	(D)	138,153	254,671	(D)
	Wire strand:						
33151 33	For prestressed concrete	8	(D)	(D)	339,304	374,082	(D)
33151 35	Other	14	-	-	163,232	179,963	163,232
33157 71	Woven wire netting	9	(D)	(D)	56,692	62,603	55,510
	Alloy Steel	89	1,388,452	242,040	7,146,282	5,080,508	5,996,517
33122 31	Ingots	10	(D)	(D)	123,314	115,439	194,109
	Semifinished products:						
33122 36	Blooms, billets, slabs, sheet bars, rounds, and skelp ⁸	16	926,879	86,789	1,197,703	632,695	357,613
33122 39	Wire rods	6	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)
	Finished products:						
33124 34	Plates and structural shapes (3 inches and over)	13	(D)	(D)	909,412	535,579	910,337
	Sheet:						
33123 31	Hot rolled	9	(D)	(D)	1,460,651	603,398	1,452,673
33167 31	Cold rolled	12	(D)	(D)	205,152	163,518	201,228
	Sheets and strip:						
	Galvanized:						
33123 35	Hot dipped ⁹	5	(D)	(D)	435,289	397,848	435,434
33123 36	Electrolytic	4	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
33123 38	All other metallic coated	5	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
	Strip:						
33123 39	Hot rolled	6	(D)	(D)	14,297	8,677	4,026
33167 35	Cold finished	14	(D)	(D)	226,364	327,359	221,583
	Bars:						
33124 41	Hot rolled, including structural shapes under 3 inches	21	(D)	(D)	1,488,987	930,497	1,300,940
33168 31	Cold finished	23	(D)	(D)	239,142	267,487	173,333
	Tool steel:						
33124 48	High speed	9	(D)	(D)	12,935	81,547	12,391
33124 49	Other than high speed	5	(D)	(D)	32,924	89,267	32,477
	Pipe and tubes:						
33170 32	Oil country goods and line pipe	7	(D)	(D)	362,740	321,085	344,468
33170 43	Pressure tubing	8	(D)	(D)	14,944	60,589	14,236
33170 45	Mechanical tubing ¹⁰	15	83,913	4,978	348,998	455,592	270,063
33170 48	Miscellaneous, including standard and structural	4	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
	Wire (plain and coated):						
33155 34	Of high speed ¹¹	2	(D)	(D)	56,063	89,931	57,592
33155 35	Of silicon-manganese	2	(¹¹)	(¹¹)	(¹¹)	(¹¹)	(¹¹)
33155 36	Other alloy steel	18	(¹¹)	(¹¹)	(¹¹)	(¹¹)	(¹¹)

See footnotes at end of table.

Table 8. RECEIPTS, CONSUMPTION, SHIPMENTS, AND NET SHIPMENTS OF STEEL MILL PRODUCTS: 1991—Continued

[Quantity in metric tons; value in thousands of dollars]

Product code ¹	Product description	Number of companies	Receipts ^{2 3} (quantity)	Steel consumed in producing plants (quantity)	Total shipments		Net shipments (quantity)
					Quantity	Value f.o.b. plant	
	Steel—Cont.						
33122 51	Stainless steel	88	751,144	113,784	2,181,122	5,527,905	1,538,635
	Ingots	9	(D)	(D)	16,763	68,155	23,633
33122 56	Semifinished products:						
	Blooms, billets, slabs, sheet bars, tube rounds, and skelp	14	108,640	28,717	184,049	331,545	104,126
33122 59	Wire rods	6	12,581	2,601	25,836	84,190	15,857
33124 53	Finished products:						
	Plates and structurals	10	(D)	(D)	143,050	459,786	140,043
33123 57	Sheets and strip:						
	Hot rolled	8	(D)	(D)	628,467	949,871	188,556
33167 57	Cold rolled	16	111,937	28,948	822,291	2,007,198	739,301
33124 61	Bars:						
	Hot rolled	12	(D)	(D)	63,821	206,181	57,073
33168 51	Cold finished	18	(D)	(D)	111,380	471,381	99,835
	Pipe and tubes:						
33170 61	Pressure tubing:						
	Seamless	8	(D)	(D)	8,510	86,312	7,547
33170 62	Welded	14	(D)	(D)	48,279	238,712	43,573
33170 63	Mechanical tubing:						
	Seamless	6	(D)	(D)	3,229	38,096	1,761
33170 64	Welded ¹²	20	(D)	(D)	61,177	301,788	60,790
33170 65	Other pipe and tube	2	(¹²)	(¹²)	(¹²)	(¹²)	(¹²)
	Wire:						
33155 52	Round wire:						
	Under 0.75 mm in diameter	12	(D)	(D)	5,001	39,112	4,652
33155 53	0.75 mm to under 1.5 mm in diameter	10	77	54	8,980	43,276	8,956
33155 54	1.5 mm and above	15	2,677	512	44,826	174,954	42,662
33155 55	Flat wire	7	(D)	(D)	849	4,696	784
33155 56	Other shape wire	8	(D)	(D)	4,614	22,652	4,614

Note: Quantity data converted to metric tons; therefore, the detail may not add to total.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. In some cases, figures which are otherwise publishable are withheld to avoid disclosing by subtraction from higher-level totals or from related figures. (NA) Not available. ¹Revised by 5 percent or more from previously published figures.

¹Product codes in the 33155 series also include products in the 33125 series; the same applies for 33167 and 33127, 33168 and 33128, and 33170 and 33126.

²Excludes receipts and shipments of steel processed on a conversion basis for nonsteel producing companies. Receipts data represent receipts at producing mills only and include receipts from domestic sources.

³Import receipts of steel mill products for 1991 are as follows: total, 3,172,227 metric tons; carbon, 3,001,948 metric tons; alloy, 122,923 metric tons; stainless, 47,351 metric tons.

⁴Product code 3312C combines product codes 3312C 11, 3312C 13, 3312C 15, 3312C 17, 3312C 19, 3312C 21, and 3312C 23.

⁵See table 5, footnote 2.

⁶The data for product codes 33155 14 and 33155 16 are combined to avoid disclosing figures for individual companies.

⁷Represents wire products produced within steel works and wire drawing establishments. See the 1987 Census of Manufactures, MC87-I-33A, tables 6A-1, 6A-2, and 6A-3 for detailed information.

⁸The data for product codes 33122 36 and 33122 39 are combined to avoid disclosing figures for individual companies.

⁹The data for product codes 33123 35, 33123 36, and 33123 38 are combined to avoid disclosing figures for individual companies.

¹⁰The data for product codes 33170 45 and 33170 48 are combined to avoid disclosing figures for individual companies.

¹¹The data for product codes 33155 34, 33155 35, and 33155 36 are combined to avoid disclosing figures for individual companies.

¹²The data for product codes 33170 64 and 33170 65 are combined to avoid disclosing figures for individual companies.

Table 9. MINI-MILL SHIPMENTS OF SELECTED STEEL MILL PRODUCTS: 1992 AND 1991

[Quantity in metric tons]

Product code ¹	Product description	Number of mini-mill companies	1992			1991		
			Industry (total)	Mini-mills (total)	Percent of mini-mills (total)	Industry (total)	Mini-mills (total)	Percent of mini-mills (total)
33122 11	Carbon steel	28	34,133,038	14,526,578	42.6	'33,287,666	13,125,932	39.4
	Ingots	2	271,372	(D)	(D)	'198,179	(D)	(D)
	Semifinished products:							
33122 13, 20	Blooms, billets, slabs, sheet bars, tin mill bars, tube rounds, and skelp ²	15	2,161,935	659,546	30.5	'3,304,577	919,490	27.8
33122 19	Wire rods	5	2,686,480	1,561,989	58.1	2,828,820	1,687,402	59.7
	Finished products:							
33124 13, 14	Plates	3	3,713,369	715,732	19.3	4,058,415	868,998	21.4
33123 19	Hot rolled strip.	3	1,026,089	(D)	(D)	'871,354	(D)	(D)
	Structural shapes (heavy): ³							
33124 15	Wide flange	3	1,449,438	(D)	(D)	(D)	(D)	(D)
33124 17	Standard heavy shapes.	5	1,866,498	1,820,603	97.5	2,899,779	1,843,880	63.6
33124 18	Sheet piling and bearing piles ...	1	361,240	(D)	(D)	330,409	(D)	(D)
	Bars:							
33124 22	Hot rolled bars (except concrete reinforcing)	17	5,484,455	4,007,188	73.1	4,401,327	2,854,676	64.9
33124 24	Light structurals (under 3 inches)	6	1,072,252	708,816	66.1	1,166,897	755,416	64.7
33124 26	Concrete reinforcing bars	14	4,233,096	3,199,654	75.6	4,553,995	3,294,100	72.3
33168 11	Cold finished bars.	1	1,033,243	(D)	(D)	954,836	(D)	(D)
3312C —	Rails, wheels, and track accessories ⁴	2	590,868	(D)	(D)	554,526	(D)	(D)
	Pipe and tubes:							
33170 14	Line pipe, 16 inches od and under.	2	978,762	(D)	(D)	933,265	(D)	(D)
33170 19	Oil country goods	2	568,274	(D)	(D)	618,770	(D)	(D)
33170 23	Mechanical tubing, seamless.	1	79,146	(D)	(D)	86,758	(D)	(D)
33170 27	Structurals	2	801,153	(D)	(D)	764,389	(D)	(D)
33170 29	Miscellaneous, including standard pipe.	2	1,785,460	(D)	(D)	1,172,378	(D)	(D)
33155 00	Wire ⁵	3	2,143,872	200,362	9.3	2,041,315	198,066	9.7
3315- —	Wire products ⁶	1	801,153	(D)	(D)	1,547,675	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

¹Revised by 5 percent or more from previously published figures.¹See table 7, footnote 1.²Product codes 33122 13 and 33122 20 were reported as product code 33122 13 in 1991.³Product codes 33124 15 and 33124 17 were reported as product code 33124 16 in 1991.⁴See table 7, footnote 5.⁵Product code 33155 00 combines product codes 33155 01 through 33155 21.⁶Product code 3315- — combines product codes 33152 21, 33159 51, 33156 21, 33159 55, 33151 33, 33151 35, and 33157 71.

Table 10. NET SHIPMENTS, EXPORTS, IMPORTS AND APPARENT CONSUMPTION OF STEEL MILL PRODUCTS: 1992

[Quantity in metric tons; value in thousands of dollars]

Product code ¹	Product description	Manufacturers' net shipments ^{1 2}		Exports of domestic merchandise ^{1 3}		Imports for consumption ^{1 4}		Apparent consumption ^{2 6}	
		Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	Value c.i.f. ⁵	Quantity	Value
	Net shipments ⁷	81,502,129	50,370,815	3,863,322	3,020,874	31,609,929	17,832,205	109,248,736	65,182,146
	Carbon steel	74,514,299	40,538,716	3,271,882	2,046,242	28,030,301	13,293,315	99,272,717	51,785,789
33122 11	Ingots	271,372	62,222	46,622	25,415	-	-	224,750	36,807
33122 13	Blooms, billets, sheet bars, tin mill bars, tube rounds, and skelp ⁸	2,492,951	933,257	285,717	92,200	4,029,948	1,001,298	6,237,182	1,842,355
33122 20	Slabs	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)
33122 19	Wire rods	2,686,480	1,306,337	31,964	13647	2,045,769	823,723	4,700,285	2,116,413
33124 13	Plates - cut lengths ⁹	3,713,369	1,661,395	339,647	149,936	2,569,569	910,393	5,943,291	2,421,852
33124 14	Plates - in coils	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
33123 11, 19	Hot rolled sheet and strip, including hot rolled bands	13,252,294	6,825,347	414,912	183,139	4,921,695	1,764,079	17,759,076	8,406,287
33167 11	Cold rolled sheet	11,905,854	5,928,205	285,379	155,230	1,572,125	712,370	13,192,600	6,485,345
33123 13	Sheet and strip, galvanized by hot dipping	6,636,696	4,182,434	145,757	110,991	1,558,582	964,612	8,049,521	5,036,055
33123 15	Sheet and strip, galvanized by electrolytic method	1,544,238	1,077,889	124,395	88,889	441,068	291,534	1,860,911	1,280,534
33123 17	Sheet and strip, galvanized by electrical method	415,492	274,832	112,776	130,280	1,199,282	803,671	2,318,534	1,527,507
33123 18	All other metallic coated, including long ternes	816,536	579,284	-	-	-	-	816,536	579,284
33167 15	Cold rolled strip	1,038,740	843,023	64,205	54,691	1,749,566	947,912	2,724,101	1,736,244
33123 24	Black plate	314,778	181,574	4,294	1,799	1,548,300	956,163	1,858,783	1,135,938
33123 26	Electrolytic and hot dipped tin plate	2,545,920	1,822,356	253,218	147,009	934,929	643,118	3,227,631	2,318,465
33123 28	Tin free steel	224,346	145,183	-	-	-	-	224,346	145,183
33123 29	All other tin mill products, including short ternes and foil	537,188	368,838	-	-	-	-	537,188	368,838
	Structural shapes (heavy):								
33124 15	Wide flange ¹⁰	3,315,936	1,269,116	246,727	121,124	-	-	3,069,209	1,147,992
33124 17	Standard heavy shapes	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
33124 18	Sheet piling and bearing piles	361,240	144,330	8,678	6,519	-	-	352,562	137,811
33124 22	Hot rolled bars (except concrete reinforcing)	5,484,455	2,247,517	181,785	106,523	974,122	494,227	6,276,792	2,635,221
33124 24	Light structurals (under 3 inches) ...	1,072,252	370,068	41,719	22,260	101,657	45,276	1,132,190	393,084
33124 26	Concrete reinforcing bars	4,233,096	1,170,977	166,522	52,461	585,118	225,828	4,651,693	1,344,344
33168 11	Cold finished bars	1,033,243	938,996	-	-	129,095	87,587	1,162,338	1,026,583
3312C -	Rails, wheels, and track accessories ¹¹	599,657	377,633	21,887	15,720	-	-	577,771	361,913
33170 -	Pipe and tubes ¹²	6,388,064	4,806,316	403,706	454,647	2,572,852	1,628,954	8,557,209	5,980,623
33155 -	Wire ¹³	2,143,872	1,531,139	69,329	73,847	966,170	772,487	3,040,713	2,229,779
3315X -	Wire products ¹⁴	1,486,231	1,490,448	22,643	39,915	130,452	220,083	1,594,041	1,670,616
	Alloy steel	5,465,108	5,006,015	490,343	679,463	2,371,321	2,246,892	7,346,086	6,573,444
33122 31	Ingots	146,225	54,072	17,730	12,574	-	-	128,496	41,498
33122 37	Blooms, billets, sheet bars, tube rounds and skelp ¹⁵	339,287	511,413	28,616	39,952	-	-	310,672	471,461
33122 41	Slabs	(¹⁵)	(¹⁵)	(¹⁵)	(¹⁵)	(¹⁵)	(¹⁵)	(¹⁵)	(¹⁵)
33124 33	Plates - cut lengths ¹⁶	528,454	350,392	-	-	288,406	202,338	816,860	552,730
33124 36	Plates in coils	(¹⁶)	(¹⁶)	(¹⁶)	(¹⁶)	(¹⁶)	(¹⁶)	(¹⁶)	(¹⁶)
33123 31, 33167 31	Sheet, hot and cold rolled	1,387,331	661,070	109,329	140,629	746,992	608,055	2,024,994	1,128,496
33123 39, 33167 35	Strip, hot and cold rolled	244,758	317,894	-	-	383,855	398,667	628,613	716,561
32123 35, 37	Other sheet and strip, including hot dipped galvanized and electrolytically galvanized	338,565	329,671	-	-	-	-	338,565	329,671
33122 39, 33124 38, 41, 33168 31	Bars and rods, hot rolled and cold finished, including structural shapes under 3 inches	1,813,278	1,294,327	120,305	123,826	551,299	419,012	2,244,272	1,589,513
33124 48	High-speed tool steel	11,944	92,743	623	5,175	22,450	21,568	33,771	109,136
33124 49	Tool steel (except high-speed)	44,011	121,538	4,072	15,081	99,160	203,091	139,100	309,548
33170 -	Pipe and tubes ¹⁷	561,693	1,204,311	199,042	320,661	279,158	394,161	641,809	1,277,811
33155 37	Wire, plain and coated	49,563	68,584	10,628	21,565	-	-	38,935	47,019

See footnotes at end of table.

Table 10. **NET SHIPMENTS, EXPORTS, IMPORTS AND APPARENT CONSUMPTION OF STEEL MILL PRODUCTS: 1992—Continued**

[Quantity in metric tons; value in thousands of dollars]

Product code ¹	Product description	Manufacturers' net shipments ²		Exports of domestic merchandise ^{1 3}		Imports for consumption ^{1 4}		Apparent consumption ^{2 6}	
		Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	Value c.i.f. ⁵	Quantity	Value
33122 51	Stainless steel	1,522,723	4,826,084	101,098	295,169	1,208,307	2,291,998	2,629,932	6,822,913
33122 56	Ingots	15,723	26,437	1,789	10,914	617	1,122	14,550	16,645
	Blooms, billets, slabs, sheet bars, tube rounds, and skelp	119,924	258,931	3,188	19,932	290,410	248,341	407,146	487,340
33122 59, 33124 61	Rods and bars	57,147	230,450	3,109	13,124	105,782	245,440	159,820	462,766
33124 53	Plates and structurals	146,643	439,636	19,076	38,115	101,892	235,138	229,459	636,659
33123 57	Hot rolled sheet and strip	207,875	1,023,713	30,996	65,371	19,769	39,710	196,648	998,052
33167 57	Cold rolled sheet and strip	826,125	2,133,305	35,231	112,743	458,705	904,049	1,249,599	2,924,611
33168 51	Cold finished rods and bars	98,673	438,170	5,730	22,653	162,900	418,367	255,843	833,884
33170 —	Pipe and tubes	(¹⁷)	(¹⁷)	(¹⁷)	(¹⁷)	(¹⁷)	(¹⁷)	(¹⁷)	(¹⁷)
33155 —	Wire	50,612	275,442	1,979	12,317	68,233	199,831	116,866	462,956

- Represents zero.

¹For a comparison of SIC-based product codes with Schedule B export numbers and HTSUSA import numbers, see appendix B.²Excludes shipments of steel processed on a conversion basis for nonsteel producing companies. Also exclude quantities of steel consumed in steel producing plants in the manufacture of fabricated products and as maintenance, repair, and operating supplies (MRO).³Source: Bureau of the Census report EM 545, *U.S. Exports*.⁴Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.⁵This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus U.S. import duties.⁶Apparent consumption is derived by subtracting "Exports" from the total "Manufacturers' shipments" plus "Imports."⁷Includes quantities of steel consumed in steel producing plants in the manufacture of fabricated products and maintenance, repair, and operating supplies (MRO), while excluding receipts. Refer to table 7 for the net shipments detail.⁸Data for product codes 33122 13 and 33122 20 are combined.⁹Data for product codes 33124 13 and 33124 14 are combined.¹⁰Data for product codes 33124 15 and 33124 17 are combined.¹¹Product code 3312C combines data for "Rails, wheels, and track accessories." See table 7 for product class detail.¹²Product code 33170 combines data for "Pipe and tubes." See table 7 for product class detail.¹³Product code 33155 combines data for "Wire." See table 7 for product class detail.¹⁴Product code 3315X combines data for "Wire products." See table 7 for product class detail.¹⁵Data for product codes 33122 37 and 33122 41 are combined.¹⁶Data for product codes 33124 33 and 33124 36 are combined.¹⁷Data for "Alloy pipe and tubes" are combined with "Stainless steel pipe and tubes."

HISTORICAL NOTE

Data on steel mill products have been collected by the Bureau of the Census since 1921. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Renee Reda, 301-763-7865 or Cynthia Ramsey, 301-763-5440.

6.3 ALUMINUM INGOT AND MILL PRODUCTS

INTRODUCTION

These data cover companies engaged in the production, in the continental United States, of aluminum ingot and/or mill products. Master alloys are included. Receipts of imported aluminum products are also included. Companies engaged in tolling operations are also covered.

The statistics were collected by mail on Bureau of the Census monthly Form M33D, Aluminum Producers and Importers Report (Receipt, Shipments, and Stocks). The panel for this survey consists of all known producers of aluminum ingot and mill products shipping 10,000 pounds or more of aluminum ingot and mill products per month, approximately 300 companies. Based on an earlier study, small producers shipping less than 10,000 pounds per month would not significantly affect the survey results.

SUMMARY OF FINDINGS

Net shipments of aluminum ingot and mill products totaled 16,064 million pounds in 1992, a 5-percent increase from the 15,298 million pounds in 1991. The aluminum ingot net shipments for 1992 totaled 3,517 million pounds, a 3-percent decrease from the corresponding 1991 net shipments of 3,631 million pounds. Net shipments of aluminum mill products in 1992 amounted to 12,547 million pounds, which was an 8-percent increase from the 11,667 million pounds reported in 1991.

EXPLANATION OF TERMS

Gross Shipments. Represents the quantity of physical shipments from domestic establishments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale or use. Shipments of products purchased for resale are omitted. Shipments of products made under toll arrangements are included.

Receipts. Represents metal physically received, both from imports and from domestic sources. Metal received under toll arrangements, even though title or ownership of the metal may remain with the shipper, is also included. Scrap receipts are not included.

Inventories. Includes all forms of scrap, ingot, metal in process, and finished products listed in this report. All metal physically in plant inventories at the end of the month, whether or not title or ownership of the metal may have been transferred, including toll arrangements.

Ingot Inventory. All metal that is in the form of extrusion billets or other ingot and molten metal, primary and secondary.

Scrap Inventory. Purchased and toll-treated aluminum-base scrap and sweated pig in all forms, as well as home or runaround scrap. Also includes remelt scrap ingot (RSI).

All Other Inventory. Includes all mill products that are in a finished state or are in the process of being finished.

Integrated Producers. Companies in the United States that produce primary aluminum ingot (from alumina) and may also produce mill products.

Nonintegrated Producers. Companies that produce mill products in the United States and that are not affiliated with a domestic primary ingot producer.

Smelters. Companies whose aluminum facilities are exclusively devoted to producing specification ingot from scrap.

Ingot (Billet), Extrusion. A solid or hollow cast form, usually cylindrical, suitable for extruding.

Other Ingot and Molten Metal, Primary and Secondary. Molten aluminum or a solid form (other than extrusion ingot) suitable for remelting or fabricating, produced either from alumina or from scrap; excludes remelt scrap ingot (RSI), which is considered scrap until remelted and cast into specification ingot.

Foil. A flat rolled product, rectangular in cross-section, and less than 0.006 inch.

Sheet. A rolled product, flat or coiled, rectangular in cross-section, and 0.006 inches in thickness, but under 0.250 inches in thickness.

Plate. A flat rolled product, rectangular in cross-section, and 0.250 inch or greater in thickness.

Wire. A solid wrought product that is long in relation to cross-section, which is square, round, rectangular, hexagonal, or octagonal in shape and whose diameter or greatest perpendicular distance between parallel faces (except for flattened wire) is less than 0.375 inch.

Drawing Stock (Redraw Rod) (Continuous Cast or Rolled). A solid round product that is long in relation to cross-section, 0.375 inch or greater in diameter, produced by continuous casting followed by size-rolling or by rolling from D.C. cast ingot, suitable for drawing into wire.

Rod and Bar (Rolled and/or Extruded). A solid round, square, rectangular, hexagon, or octagonal-shaped product that is long in relation to cross-section, and 0.375 inch or greater in diameter or in at least one perpendicular distance between parallel faces, produced by continuous casting or rolling or by extruding; other than drawing stock and D.C. cast ingot.

Pipe and Tube (Extruded and Drawn). A hollow wrought product with a uniform wall thickness (except as affected by corner radii) that is long in relation to its cross-section, round, square, rectangular, hexagonal, octagonal, or elliptical in shape, produced either by hot extruding and/or brought to final dimensions by cold drawing through a die.

Extruded Shapes. A product produced by extruding, that is long in relation to its cross-sectional dimension and has a cross-section other than that of rod and bar or pipe and tube.

Cable, ACSR, and Aluminum (Bare). Aluminum stranded conductor reinforced by a core of steel (ACSR); or any other bare stranded aluminum conductor.

Powder, Atomized. Powder produced by blowing or asperating molten metal through an orifice.

Other Flake, Powder, and Paste. Includes the following products:

Powder. An aggregate of discrete particles of aluminum, substantially all of which are finer than 1,000 microns (minus 18 mesh).

Paste. A blend of powder or flake with a thinner or plasticizer.

Powder, Flaked. Powder consisting of flat or scale-like particles of a thickness that is small compared with other dimensions, and is produced by milling in the presence of a lubricant.

Forgings (Excluding Impact Extrusions). A product worked to a predetermined shape by one or more processes, such as hammering, upsetting, pressing, and rolling.

Impacts (Excluding Collapsible Tubes and Cans). A product formed in a confining die from a metal slug, usually cold, by a rapid simple stroke application of force through a punch, causing the metal to flow around the punch, and/or through an opening in the punch or die.

Table 11. NET SHIPMENTS AND INVENTORIES OF ALUMINUM INGOT AND MILL PRODUCTS: 1992 AND 1991

[Thousands of pounds]

Month and year	Net shipments of aluminum			Month-end aluminum inventories
	Ingot and mill products	Mill products	Ingot	
1992				
Total.....	16,064,045	12,546,776	3,517,269	(X)
December.....	1,360,105	943,537	416,568	4,133,416
November.....	1,333,076	978,420	354,656	4,265,434
October.....	1,453,396	1,085,890	367,506	4,339,222
September.....	1,360,976	1,061,377	299,599	4,419,437
August.....	1,333,239	1,029,872	303,367	4,378,069
July.....	1,329,599	1,072,993	256,606	4,335,483
June.....	1,338,803	1,074,550	264,253	4,483,733
May.....	1,277,117	1,085,244	191,873	4,487,158
April.....	1,298,557	1,076,813	221,744	4,412,050
March.....	1,375,798	1,120,071	255,727	4,376,533
February.....	1,279,524	985,863	293,661	4,346,657
January.....	1,323,855	1,032,146	291,709	4,322,457
1991				
Total.....	15,298,496	11,667,108	3,631,388	(X)
December.....	1,241,231	874,323	366,908	3,912,863
November.....	1,265,079	942,574	322,505	3,922,537
October.....	1,371,398	1,033,623	337,775	3,992,092
September.....	1,276,244	974,706	301,538	4,007,832
August.....	1,389,261	1,047,917	341,344	4,027,871
July.....	1,386,785	1,029,572	357,213	4,083,705
June.....	1,286,992	998,521	288,471	4,118,625
May.....	1,312,962	1,028,211	284,751	4,192,825
April.....	1,243,824	996,801	247,023	4,496,168
March.....	1,261,376	949,811	311,565	4,262,809
February.....	1,086,822	871,974	214,848	4,178,810
January.....	1,176,522	919,075	257,447	4,084,950

Note: Use December inventory figures for annual total inventory.

(X) Not applicable.

Table 12. SHIPMENTS AND RECEIPTS OF ALUMINUM INGOT AND MILL PRODUCTS, BY TYPE OF PRODUCER: 1992

[Thousands of pounds]

Product description	Total			January			February		
	Gross shipments	Total receipts	Net shipments	Gross shipments	Total receipts	Net shipments	Gross shipments	Total receipts	Net shipments
Aluminum ingot and mill products	24,423,032	8,358,987	16,064,045	2,072,498	748,643	1,323,855	1,981,467	701,943	1,279,524
Integrated	13,984,171	2,943,403	11,040,768	1,193,769	284,625	909,144	1,142,746	270,518	872,228
Smelters	2,022,892	713,393	1,309,499	167,024	58,929	108,095	162,811	55,990	106,821
All other	8,415,969	4,702,191	3,713,778	711,705	405,089	306,616	675,910	375,435	300,475
Imports (ingot only)	2,565,283	-	2,565,283	226,480	-	226,480	206,758	-	206,758
Nonintegrated	5,850,686	4,702,191	1,148,495	485,225	405,089	80,136	469,152	375,435	93,717
Mill products	14,016,149	1,469,373	12,546,776	1,156,613	124,467	1,032,146	1,107,997	122,134	985,863
By type of producer:									
Integrated	10,046,404	611,228	9,435,176	830,060	52,985	777,075	791,315	54,092	737,223
Nonintegrated	3,969,745	858,145	3,111,600	326,553	71,482	255,071	316,682	68,042	248,640
Ingot	10,406,883	6,889,614	3,517,269	915,885	624,176	291,709	873,470	579,809	293,661
By type of producer:									
Integrated	3,937,767	2,332,175	1,605,592	363,709	231,640	132,069	351,431	216,426	135,005
Smelters ¹	2,022,892	713,393	1,309,499	167,024	58,929	108,095	162,811	55,990	106,821
All other	4,446,224	3,844,046	602,178	385,152	333,607	51,545	359,228	307,393	51,835
Imports ²	2,565,283	-	2,565,283	226,480	-	226,480	206,758	-	206,758
Nonintegrated	1,880,941	3,844,046	-1,963,105	158,672	333,607	-174,935	152,470	307,393	-154,923
By type of ingot:									
Extrusion ingot	2,154,882	1,962,773	192,112	175,959	169,062	6,898	171,991	154,403	17,589
Integrated	750,992	138,754	612,238	59,048	10,856	48,192	57,180	9,552	47,628
Smelter ¹	(D)	(D)	244,154	(D)	(D)	21,088	(D)	(D)	20,153
All other	(D)	(D)	-664,280	(D)	(D)	-62,382	(D)	(D)	-50,192
Imports ²	300,805	-	300,805	22,811	-	22,811	26,484	-	26,484
Nonintegrated	(D)	(D)	-965,085	(D)	(D)	-85,193	(D)	(D)	-76,676
Other ingot (primary and secondary)	8,251,999	4,926,839	3,325,157	739,925	455,114	284,811	701,479	425,406	276,072
Integrated	3,186,775	2,193,421	993,354	304,661	220,784	83,877	294,251	206,874	87,377
Smelters ¹	(D)	(D)	1,065,345	(D)	(D)	87,007	(D)	(D)	86,668
All other	(D)	(D)	1,266,458	(D)	(D)	113,927	(D)	(D)	102,027
Imports ²	2,264,478	-	2,264,478	203,669	-	203,669	180,274	-	180,274
Nonintegrated	(D)	(D)	-998,020	(D)	(D)	-89,742	(D)	(D)	-78,247
	March			April			May		
Aluminum ingot and mill products	2,174,593	798,795	1,375,798	2,048,827	750,270	1,298,557	1,992,844	715,727	1,277,117
Integrated	1,267,072	309,226	957,846	1,171,170	293,099	878,071	1,118,938	262,229	856,709
Smelters	179,076	63,268	115,808	174,749	61,286	113,463	167,737	60,553	107,184
All other	728,445	426,301	302,144	702,908	395,885	307,023	706,169	392,945	313,224
Imports (ingot only)	215,832	-	215,832	210,081	-	210,081	213,230	-	213,230
Nonintegrated	512,613	426,301	86,312	492,827	395,885	96,942	492,939	392,945	99,994
Mill products	1,252,013	131,942	1,120,071	1,199,873	123,060	1,076,813	1,209,596	124,352	1,085,244
By type of producer:									
Integrated	903,312	54,311	849,001	867,180	52,352	814,828	875,402	54,984	820,418
Nonintegrated	348,701	77,631	271,070	332,693	70,708	261,985	334,194	69,368	264,826
Ingot	922,580	666,853	255,727	848,954	627,210	221,744	783,248	591,375	191,873
By type of producer:									
Integrated	363,760	254,915	108,845	303,990	240,747	63,243	243,536	207,245	36,291
Smelters ¹	179,076	63,268	115,808	174,749	61,286	113,463	167,737	60,553	107,184
All other	379,744	348,670	31,074	370,215	325,177	45,038	371,975	323,577	48,398
Imports ²	215,832	-	215,832	210,081	-	210,081	213,230	-	213,230
Nonintegrated	163,912	348,670	-184,758	160,134	325,177	-165,043	158,745	323,577	-164,832
By type of ingot:									
Extrusion ingot	190,568	178,016	12,552	184,855	163,390	21,464	187,115	163,095	24,019
Integrated	69,433	13,336	56,097	60,481	11,284	49,197	67,512	11,642	55,870
Smelter ¹	(D)	(D)	21,478	(D)	(D)	20,577	(D)	(D)	20,300
All other	(D)	(D)	-65,023	(D)	(D)	-48,310	(D)	(D)	-52,151
Imports ²	27,626	-	27,626	29,063	-	29,063	27,451	-	27,451
Nonintegrated	(D)	(D)	-92,649	(D)	(D)	-77,373	(D)	(D)	-79,602
Other ingot (primary and secondary)	732,012	488,838	243,175	664,099	463,819	200,280	596,133	428,279	167,854
Integrated	294,327	241,579	52,748	243,509	229,463	14,046	176,024	195,603	-19,579
Smelters ¹	(D)	(D)	94,330	(D)	(D)	92,886	(D)	(D)	86,884
All other	(D)	(D)	96,097	(D)	(D)	93,348	(D)	(D)	100,549
Imports ²	188,206	-	188,206	181,018	-	181,018	185,779	-	185,779
Nonintegrated	(D)	(D)	-92,109	(D)	(D)	-87,670	(D)	(D)	-85,230

See footnotes at end of table.

Table 12. SHIPMENTS AND RECEIPTS OF ALUMINUM INGOT AND MILL PRODUCTS, BY TYPE OF PRODUCER: 1992—Continued

[Thousands of pounds]

Product description	June			July			August		
	Gross shipments	Total receipts	Net shipments	Gross shipments	Total receipts	Net shipments	Gross shipments	Total receipts	Net shipments
Aluminum ingot and mill products..	2,033,665	694,862	1,338,803	2,013,888	684,287	1,329,599	2,002,151	668,912	1,333,239
Integrated	1,168,046	230,167	937,879	1,181,443	223,205	958,238	1,127,911	234,737	893,174
Smelters	173,156	61,067	112,089	159,498	59,432	100,066	164,026	57,655	106,371
All other	692,463	403,628	288,835	672,945	401,650	271,295	710,214	378,520	333,694
Imports (ingot only)	194,418	-	194,418	183,215	-	183,215	229,402	-	229,402
Nonintegrated	498,045	403,628	94,417	489,730	401,650	88,080	480,812	378,520	104,292
Mill products	1,201,734	127,184	1,074,550	1,187,024	114,031	1,072,993	1,150,037	120,165	1,029,872
By type of producer:									
Integrated	867,107	57,284	809,823	855,727	47,494	808,233	818,345	53,547	764,798
Nonintegrated	334,627	69,900	264,727	331,297	66,537	264,760	331,692	66,618	265,074
Ingot	831,931	567,678	264,253	826,862	570,256	256,606	852,114	548,747	303,367
By type of producer:									
Integrated	300,939	172,883	128,056	325,716	175,711	150,005	309,566	181,190	128,376
Smelters ¹	173,156	61,067	112,089	159,498	59,432	100,066	164,026	57,655	106,371
All other	357,836	333,728	24,108	341,648	335,113	6,535	378,522	309,902	68,620
Imports ²	194,418	-	194,418	183,215	-	183,215	229,402	-	229,402
Nonintegrated	163,418	333,728	-170,310	158,433	335,113	-176,680	149,120	309,902	-160,782
By type of ingot:									
Extrusion ingot	188,655	167,409	21,247	188,683	183,593	5,090	170,421	153,639	16,782
Integrated	68,034	13,315	54,719	66,810	12,944	53,866	57,621	8,453	49,168
Smelter ¹	(D)	(D)	21,430	(D)	(D)	20,997	(D)	(D)	18,827
All other	(D)	(D)	-54,902	(D)	(D)	-69,773	(D)	(D)	-51,213
Imports ²	25,983	-	25,983	27,002	-	27,002	24,770	-	24,770
Nonintegrated	(D)	(D)	-80,885	(D)	(D)	-96,775	(D)	(D)	-75,983
Other ingot (primary and secondary) ..	643,274	400,268	243,006	638,180	386,663	251,516	681,693	395,107	286,585
Integrated	232,905	159,568	73,337	258,906	162,767	96,139	251,945	172,737	79,208
Smelters ¹	(D)	(D)	90,659	(D)	(D)	79,069	(D)	(D)	87,544
All other	(D)	(D)	79,010	(D)	(D)	76,308	(D)	(D)	119,833
Imports ²	168,435	-	168,435	156,213	-	156,213	204,632	-	204,632
Nonintegrated	(D)	(D)	-89,425	(D)	(D)	-79,905	(D)	(D)	-84,799
September						October			
	Gross shipments	Total receipts	Net shipments	Gross shipments	Total receipts	Net shipments	Gross shipments	Total receipts	Net shipments
Aluminum ingot and mill products..	2,036,279	675,303	1,360,976	2,131,233	677,837	1,453,396			
Integrated	1,179,288	235,160	944,128	1,198,670	221,439	977,231			
Smelters	167,592	58,294	109,298	176,996	60,612	116,384			
All other	689,399	381,849	307,550	755,567	395,786	359,781			
Imports (ingot only)	208,068	-	208,068	240,619	-	240,619			
Nonintegrated	481,331	381,849	99,482	514,948	395,786	119,162			
Mill products	1,180,733	119,356	1,061,377	1,209,368	123,478	1,085,890			
By type of producer:									
Integrated	850,632	47,711	802,921	855,543	48,660	806,883			
Nonintegrated	330,101	71,645	258,456	353,825	74,818	279,007			
Ingot	855,546	555,947	299,599	921,865	554,359	367,506			
By type of producer:									
Integrated	328,656	187,449	141,207	343,127	172,779	170,348			
Smelters ¹	167,592	58,294	109,298	176,996	60,612	116,384			
All other	359,298	310,204	49,094	401,742	320,968	80,774			
Imports ²	208,068	-	208,068	240,619	-	240,619			
Nonintegrated	151,230	310,204	-158,974	161,123	320,968	-159,845			
By type of ingot:									
Extrusion ingot	176,043	160,331	15,713	172,638	161,988	10,650			
Integrated	60,184	11,525	48,659	54,595	10,400	44,195			
Smelter ¹	(D)	(D)	21,317	(D)	(D)	19,996			
All other	(D)	(D)	-54,263	(D)	(D)	-53,541			
Imports ²	25,912	-	25,912	23,830	-	23,830			
Nonintegrated	(D)	(D)	-80,175	(D)	(D)	-77,371			
Other ingot (primary and secondary) ..	679,502	395,616	283,886	749,228	392,371	356,856			
Integrated	268,472	175,924	92,548	288,532	162,379	126,153			
Smelters ¹	(D)	(D)	87,981	(D)	(D)	96,386			
All other	(D)	(D)	103,357	(D)	(D)	134,315			
Imports ²	182,156	-	182,156	216,789	-	216,789			
Nonintegrated	(D)	(D)	-78,799	(D)	(D)	-82,474			

See footnotes at end of table.

Table 12. SHIPMENTS AND RECEIPTS OF ALUMINUM INGOT AND MILL PRODUCTS, BY TYPE OF PRODUCER: 1992—Continued

[Thousands of pounds]

Product description	November			December		
	Gross shipments	Total receipts	Net shipments	Gross shipments	Total receipts	Net shipments
Aluminum ingot and mill products	1,949,148	616,072	1,333,076	1,986,441	626,336	1,360,105
Integrated	1,093,675	200,357	893,318	1,141,443	178,641	962,802
Smelters	164,254	57,348	106,906	165,973	58,959	107,014
All other	691,219	358,367	332,852	679,025	388,736	290,289
Imports (ingot only)	223,549	-	223,549	213,631	-	213,631
Nonintegrated	467,670	358,367	109,303	465,394	388,736	76,658
Mill products	1,095,853	117,433	978,420	1,065,308	121,771	943,537
By type of producer:						
Integrated	778,431	46,066	732,365	753,350	41,742	711,608
Nonintegrated	317,422	71,367	246,055	311,958	80,029	231,929
Ingot	853,295	498,639	354,656	921,133	504,565	416,568
By type of producer:						
Integrated	315,244	154,291	160,953	388,093	136,899	251,194
Smelters ¹	164,254	57,348	106,906	165,973	58,959	107,014
All other	373,797	287,000	86,797	367,067	308,707	58,360
Imports ²	223,549	-	223,549	213,631	-	213,631
Nonintegrated	150,248	287,000	-136,752	153,436	308,707	-155,271
By type of ingot:						
Extrusion ingot	168,875	151,550	17,325	179,079	156,297	22,783
Integrated	57,753	13,549	44,204	72,341	11,898	60,443
Smelter ¹	(D)	(D)	18,562	(D)	(D)	19,429
All other	(D)	(D)	-45,441	(D)	(D)	-57,089
Imports ²	22,912	-	22,912	16,961	-	16,961
Nonintegrated	(D)	(D)	-68,353	(D)	(D)	-74,050
Other ingot (primary and secondary)	684,420	347,088	337,331	742,054	348,270	393,785
Integrated	257,491	140,742	116,749	315,752	125,001	190,751
Smelters ¹	(D)	(D)	88,344	(D)	(D)	87,585
All other	(D)	(D)	132,238	(D)	(D)	115,449
Imports ²	200,637	-	200,637	196,670	-	196,670
Nonintegrated	(D)	(D)	-68,399	(D)	(D)	-81,221

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

¹The number of secondary smelter operators shipping ingot is 26.²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*. For 1992, import numbers for ingot are: extrusion—7601.20.9045 and 7604.21.0000; other primary—7601.10.3000, 7601.20.3000, 7601.10.6000, 7601.20.9030, 7601.20.9060, 7601.20.6000, and 7601.20.9090. Imports are reported in kilograms and have been converted to pounds.

Table 13. SHIPMENTS AND RECEIPTS OF ALUMINUM INGOT AND MILL PRODUCTS, BY TYPE OF PRODUCER: 1991

[Thousands of pounds]

Product description	Total			January			February		
	Gross shipments	Total receipts	Net ship-ments	Gross shipments	Total receipts	Net ship-ments	Gross shipments	Total receipts	Net ship-ments
Aluminum ingot and mill products. .	22,046,551	6,748,055	15,298,496	1,748,535	572,013	1,176,522	1,608,202	521,380	1,086,822
Integrated	14,059,801	2,968,812	11,090,989	1,135,885	282,572	853,293	1,026,970	255,809	771,161
Smelters	1,618,930	187,475	1,431,455	132,232	15,162	117,070	111,897	14,483	97,414
All other	6,367,820	3,591,768	2,776,052	480,438	274,279	206,159	469,335	251,088	218,247
Imports (ingot only)	2,267,687	-	2,287,687	175,353	-	175,353	175,217	-	175,217
Nonintegrated	4,100,133	3,591,768	508,365	305,085	274,279	30,806	294,118	251,088	43,030
Mill products	12,609,805	942,697	11,867,108	989,161	70,086	919,075	953,805	81,831	871,974
By type of producer:									
Integrated.	9,275,699	442,928	8,832,771	738,579	30,762	707,817	711,519	39,722	671,797
Nonintegrated	3,334,108	499,769	2,834,337	250,582	39,324	211,258	242,286	42,109	200,177
Ingot	9,436,746	5,805,358	3,631,388	759,374	501,927	257,447	654,397	439,549	214,848
By type of producer:									
Integrated.	4,784,102	2,525,884	2,258,218	397,286	251,810	145,476	315,451	216,087	99,364
Smelters ¹	1,618,930	187,475	1,431,455	132,232	15,162	117,070	111,897	14,483	97,414
All other	3,033,714	3,091,999	-58,285	229,856	234,955	-5,099	227,049	208,979	18,070
Imports ²	2,267,687	-	2,287,687	175,353	-	175,353	175,217	-	175,217
Nonintegrated.	766,027	3,091,999	-2,325,972	54,503	234,955	-180,452	51,832	208,979	-157,147
By type of ingot:									
Extrusion ingot	1,632,550	1,480,660	151,890	110,183	103,988	6,195	111,910	102,772	9,138
Integrated	596,134	102,152	493,982	39,004	6,660	32,344	41,275	15,435	25,840
Smelter ¹	(D)	(D)	311,557	(D)	(D)	23,792	(D)	(D)	22,814
All other	(D)	(D)	-653,649	(D)	(D)	-49,941	(D)	(D)	-39,516
Import ²	267,865	-	267,865	15,025	-	15,025	16,173	-	16,173
Nonintegrated	(D)	(D)	-921,514	(D)	(D)	-64,966	(D)	(D)	-55,689
Other ingot (primary and secondary) .	7,804,196	4,343,466	3,479,498	649,191	397,939	251,252	542,487	336,777	205,710
Integrated	4,187,968	2,423,732	1,764,236	358,282	245,150	113,132	274,176	200,652	73,524
Smelters ¹	(D)	(D)	1,119,898	(D)	(D)	93,278	(D)	(D)	74,600
All other	(D)	(D)	595,364	(D)	(D)	44,842	(D)	(D)	57,586
Imports ²	1,999,822	-	1,999,822	160,328	-	160,328	159,044	-	159,044
Nonintegrated	(D)	(D)	-1,404,458	(D)	(D)	-115,486	(D)	(D)	-101,458
	March			April			May		
Aluminum ingot and mill products. .	1,815,556	554,180	1,261,376	1,825,744	581,920	1,243,824	1,876,145	563,183	1,312,962
Integrated	1,181,226	248,946	932,280	1,158,705	275,817	880,888	1,197,169	250,284	946,885
Smelters	126,663	16,037	110,626	123,128	16,276	106,852	138,411	14,448	123,963
All other	507,667	289,197	218,470	545,911	289,827	256,084	540,565	298,451	242,114
Imports (ingot only)	185,915	-	185,915	194,516	-	194,516	187,720	-	187,720
Nonintegrated	321,752	289,197	32,555	351,395	289,827	61,568	352,845	298,451	54,394
Mill products	1,025,643	75,832	949,811	1,082,740	85,939	996,801	1,108,486	80,275	1,028,211
By type of producer:									
Integrated.	766,803	30,792	736,011	787,145	43,286	743,859	820,729	37,168	783,561
Nonintegrated	258,840	45,040	213,800	295,595	42,653	252,942	287,757	43,107	244,650
Ingot	789,913	478,348	311,565	743,004	495,981	247,023	767,659	482,908	284,751
By type of producer:									
Integrated.	414,423	218,154	196,269	369,560	232,531	137,029	376,440	213,116	163,324
Smelters ¹	126,663	16,037	110,626	123,128	16,276	106,852	138,411	14,448	123,963
All other	248,827	244,157	4,670	250,316	247,174	3,142	252,808	255,344	-2,536
Imports ²	185,915	-	185,915	194,516	-	194,516	187,720	-	187,720
Nonintegrated.	62,912	244,157	-181,245	55,800	247,174	-191,374	65,088	255,344	-190,256
By type of ingot:									
Extrusion Ingot	123,830	116,501	7,329	130,594	113,329	17,265	143,269	121,664	21,605
Integrated	44,135	7,881	36,254	48,499	7,146	41,353	51,791	7,259	44,532
Smelter ¹	(D)	(D)	24,056	(D)	(D)	25,385	(D)	(D)	28,722
All other	(D)	(D)	-52,981	(D)	(D)	-49,473	(D)	(D)	-51,649
Imports ²	18,130	-	18,130	22,539	-	22,539	22,872	-	22,872
Nonintegrated	(D)	(D)	-71,111	(D)	(D)	-72,012	(D)	(D)	-74,521
Other Ingot (primary and secondary) .	868,083	381,847	304,236	612,410	382,652	229,758	624,390	361,244	263,146
Integrated	370,288	210,273	160,015	321,061	225,385	95,676	324,649	205,857	118,792
Smelters ¹	(D)	(D)	88,570	(D)	(D)	81,467	(D)	(D)	95,241
All other	(D)	(D)	57,651	(D)	(D)	52,615	(D)	(D)	49,113
Imports ²	167,785	-	167,785	171,977	-	171,977	164,848	-	164,848
Nonintegrated	(D)	(D)	-110,134	(D)	(D)	-119,362	(D)	(D)	-115,733

Table 13. **SHIPMENTS AND RECEIPTS OF ALUMINUM INGOT AND MILL PRODUCTS, BY TYPE OF PRODUCER: 1991—Continued**

[Thousands of pounds]

Product description	June			July			August		
	Gross shipments	Total receipts	Net shipments	Gross shipments	Total receipts	Net shipments	Gross shipments	Total receipts	Net shipments
Aluminum ingot and mill products . .	1,858,975	571,983	1,286,992	1,988,244	601,459	1,386,785	1,997,539	608,278	1,389,261
Integrated	1,200,424	246,849	953,575	1,251,967	250,856	1,001,111	1,273,642	248,877	1,024,765
Smelters	136,278	12,458	123,820	144,418	14,929	129,489	149,396	17,879	131,517
All other	522,273	312,676	209,597	591,859	335,674	256,185	574,501	341,522	232,979
Imports (ingot only)	167,543	-	167,543	215,047	-	215,047	196,693	-	196,693
Nonintegrated	354,730	312,676	42,054	376,812	335,674	41,138	377,808	341,522	36,286
Mill products	1,072,925	74,404	998,521	1,105,739	76,167	1,029,572	1,127,246	79,329	1,047,917
By type of producer:									
Integrated	784,216	32,049	752,167	806,093	33,856	772,237	823,639	38,512	785,127
Nonintegrated	288,709	42,355	246,354	299,646	42,311	257,335	303,607	40,817	262,790
Ingot	786,050	497,579	288,471	882,505	525,292	357,213	870,293	528,949	341,344
By type of producer:									
Integrated	416,208	214,800	201,408	445,874	217,000	228,874	450,003	210,365	239,638
Smelters ¹	136,278	12,458	123,820	144,418	14,929	129,489	149,396	17,879	131,517
All other	233,564	270,321	-36,757	292,213	293,363	-1,150	270,894	300,705	-29,811
Imports ²	167,543	-	167,543	215,047	-	215,047	196,693	-	196,693
Nonintegrated	66,021	270,321	-204,300	77,166	293,363	-216,197	74,201	300,705	-226,504
By type of ingot:									
Extrusion ingot	144,486	130,974	13,512	164,043	141,325	22,718	154,454	144,970	9,484
Integrated	51,875	8,591	43,284	59,202	8,592	50,610	57,334	9,125	48,209
Smelter ¹	(D)	(D)	27,506	(D)	(D)	31,691	(D)	(D)	27,097
All other	(D)	(D)	-57,278	(D)	(D)	-59,583	(D)	(D)	-65,822
Imports ²	24,779	-	24,779	26,751	-	26,751	25,674	-	25,674
Nonintegrated	(D)	(D)	-82,057	(D)	(D)	-86,334	(D)	(D)	-91,496
Other ingot (primary and secondary) .	641,564	375,989	274,959	718,462	383,967	334,495	715,839	383,979	331,860
Integrated	364,333	206,209	158,124	386,672	208,408	178,264	392,669	201,240	191,429
Smelters ¹	(D)	(D)	96,314	(D)	(D)	97,798	(D)	(D)	104,420
All other	(D)	(D)	20,521	(D)	(D)	58,433	(D)	(D)	36,011
Imports ²	142,764	-	142,764	188,296	-	188,296	171,019	-	171,019
Nonintegrated	(D)	(D)	-122,243	(D)	(D)	-129,863	(D)	(D)	-135,008
	September					October			
	Gross shipments	Total receipts	Net shipments	Gross shipments	Total receipts	Net shipments			
Aluminum ingot and mill products . .	1,866,913	590,669	1,276,244	1,958,697	587,299	1,371,398			
Integrated	1,183,408	242,636	940,772	1,226,788	242,122	984,666			
Smelters	142,364	16,687	125,677	155,937	17,287	138,650			
All other	541,141	331,346	209,795	575,972	327,890	248,082			
Imports (ingot only)	191,413	-	191,413	200,580	-	200,580			
Nonintegrated	349,728	331,346	18,382	375,392	327,890	47,502			
Mill products	1,063,283	88,577	974,706	1,128,786	95,163	1,033,623			
By type of producer:									
Integrated	782,399	46,470	735,929	824,499	52,999	771,500			
Nonintegrated	280,884	42,107	238,777	304,287	42,164	262,123			
Ingot	803,630	502,092	301,538	829,911	492,136	337,775			
By type of producer:									
Integrated	401,009	196,166	204,843	402,289	189,123	213,166			
Smelters ¹	142,364	16,687	125,677	155,937	17,287	138,650			
All other	260,257	289,239	-28,982	271,685	285,726	-14,041			
Imports ²	191,413	-	191,413	200,580	-	200,580			
Nonintegrated	68,844	289,239	-220,395	71,105	285,726	-214,621			
By type of ingot:									
Extrusion ingot	148,471	150,075	-1,604	150,419	132,659	17,760			
Integrated	54,651	8,481	46,170	51,945	9,404	42,541			
Smelter ¹	(D)	(D)	26,900	(D)	(D)	27,741			
All other	(D)	(D)	-74,674	(D)	(D)	-52,522			
Imports ²	26,506	-	26,506	32,449	-	32,449			
Nonintegrated	(D)	(D)	-101,180	(D)	(D)	-84,971			
Other ingot (primary and secondary) .	655,159	361,401	303,142	679,492	359,477	320,015			
Integrated	346,358	187,685	158,673	350,344	179,719	170,625			
Smelters ¹	(D)	(D)	98,777	(D)	(D)	110,909			
All other	(D)	(D)	45,692	(D)	(D)	38,481			
Imports ²	164,907	-	164,907	168,131	-	168,131			
Nonintegrated	(D)	(D)	-119,215	(D)	(D)	-129,655			

See footnotes at end of table.

Table 13. **SHIPMENTS AND RECEIPTS OF ALUMINUM INGOT AND MILL PRODUCTS, BY TYPE OF PRODUCER: 1991—Continued**

[Thousands of pounds]

Product description	November			December		
	Gross ship- ments	Total receipts	Net shipments	Gross ship- ments	Total receipts	Net shipments
Aluminum ingot and mill products	1,794,126	529,047	1,265,079	1,707,875	466,644	1,241,231
Integrated	1,130,987	225,656	905,331	1,094,650	198,388	896,262
Smelters	140,109	15,389	124,720	118,097	16,440	101,657
All other	523,030	288,002	235,028	495,128	251,816	243,312
Imports (ingot only)	180,420	-	180,420	197,270	-	197,270
Nonintegrated	342,610	288,002	54,608	297,858	251,816	46,042
Mill products	1,020,651	78,077	942,574	931,340	57,017	874,323
By type of producer:						
Integrated	741,292	36,428	704,864	688,786	20,884	667,902
Nonintegrated	279,359	41,649	237,710	242,554	36,133	206,421
Ingot	773,475	450,970	322,505	776,535	409,627	366,908
By type of producer:						
Integrated	389,695	189,228	200,467	405,864	177,504	228,360
Smelters ¹	140,109	15,389	124,720	118,097	16,440	101,657
All other	243,671	246,353	-2,682	252,574	215,683	36,891
Imports ²	180,420	-	180,420	197,270	-	197,270
Nonintegrated	63,251	246,353	-183,102	55,304	215,683	-160,379
By type of ingot:						
Extrusion ingot	139,017	121,754	17,263	111,874	100,649	11,225
Integrated	54,367	7,828	46,539	42,056	5,750	36,306
Smelter ¹	(D)	(D)	24,898	(D)	(D)	20,955
All other	(D)	(D)	-54,174	(D)	(D)	-46,036
Imports ²	20,463	-	20,463	16,504	-	16,504
Nonintegrated	(D)	(D)	-74,637	(D)	(D)	-62,540
Other ingot (primary and secondary)	634,458	329,216	305,242	664,661	308,978	355,683
Integrated	335,328	181,400	153,928	363,808	171,754	192,054
Smelters ¹	(D)	(D)	99,822	(D)	(D)	80,702
All other	(D)	(D)	51,492	(D)	(D)	82,927
Imports ²	159,957	-	159,957	180,766	-	180,766
Nonintegrated	(D)	(D)	-108,465	(D)	(D)	-97,839

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

¹The number of secondary smelter operators shipping ingot is 30.²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*. For 1991, import numbers for ingot are: extrusion—7601.20.9045 and 7604.21.0000; other primary—7601.10.3000, 7601.20.3000, 7601.10.6000, 7601.20.9030, 7601.20.9060, 7601.20.6000, and 7601.20.9090. Imports are reported in kilograms and have been converted to pounds.

Table 14. INVENTORIES OF ALUMINUM INGOT, MILL PRODUCTS, AND SCRAP, BY TYPE OF PRODUCER: 1992 AND 1991

[Thousands of pounds]

Type of inventory	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
1992												
Total	4,322,457	4,346,657	4,376,533	4,412,050	4,487,158	4,483,733	4,335,483	4,378,069	4,419,437	4,339,222	4,265,434	4,133,416
Integrated	2,977,971	2,996,675	3,022,344	3,044,295	3,102,428	3,121,766	2,953,784	2,999,512	3,049,475	2,968,728	2,897,497	2,720,649
Nonintegrated	893,117	903,254	910,135	916,892	921,362	915,359	921,710	919,059	918,641	927,288	926,808	959,769
Smelters	451,369	446,728	444,054	450,863	463,368	446,608	459,989	459,498	451,321	443,206	441,129	452,998
Ingot	1,537,202	1,553,477	1,538,540	1,591,906	1,623,164	1,614,652	1,543,011	1,568,854	1,664,323	1,615,137	1,538,256	1,544,721
Integrated ¹	1,040,659	1,056,298	1,033,943	1,084,095	1,100,219	1,104,066	1,027,319	1,046,383	1,128,985	1,095,294	1,009,410	1,010,653
Nonintegrated ¹	278,767	276,827	284,036	290,721	304,377	298,739	296,957	301,433	312,600	298,146	305,404	307,222
Smelters ¹	217,776	220,352	220,561	217,090	218,568	211,847	218,735	221,038	222,738	221,697	223,442	226,846
Scrap	799,076	759,327	760,985	760,035	776,699	797,360	790,382	791,531	811,401	763,213	750,422	772,212
Integrated ¹	384,279	347,990	357,768	341,458	351,024	376,921	355,040	364,429	386,472	341,824	336,540	343,634
Nonintegrated ¹	181,204	184,961	179,724	184,804	180,875	185,678	194,088	188,642	196,346	199,880	196,195	202,426
Smelters ¹	233,593	226,376	223,493	233,773	244,800	234,761	241,254	238,460	228,583	221,509	217,687	226,152
All other	1,986,179	2,033,853	2,077,008	2,060,109	2,087,295	2,071,721	2,002,090	2,017,684	1,943,713	1,960,872	1,976,756	1,816,483
Integrated ¹	1,553,033	1,592,387	1,630,633	1,618,742	1,651,185	1,640,779	1,571,425	1,588,700	1,534,018	1,531,610	1,551,547	1,366,362
Nonintegrated ¹	433,146	441,466	446,375	441,367	436,110	430,942	430,665	428,984	409,695	429,262	425,209	450,121
Smelters ¹	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
1991												
Total	4,084,950	4,178,810	4,262,809	4,496,168	4,192,825	4,118,625	4,083,705	4,027,871	4,007,832	3,992,092	3,922,537	3,912,863
Integrated	3,152,285	3,239,653	3,297,941	3,532,880	3,257,330	3,191,362	3,156,477	3,089,848	3,075,150	3,044,785	3,015,776	2,980,320
Nonintegrated	805,179	807,107	831,479	821,979	797,071	804,823	804,775	809,222	800,536	814,796	759,467	775,749
Smelters	127,486	132,050	133,389	141,309	138,424	122,440	122,453	128,801	132,146	132,511	147,294	156,794
Ingot	1,361,636	1,437,674	1,571,718	1,552,033	1,561,825	1,583,984	1,486,978	1,450,815	1,502,021	1,490,876	1,472,698	1,452,679
Integrated ¹	1,038,444	1,101,425	1,205,516	1,191,469	1,231,112	1,248,170	1,151,099	1,111,512	1,156,236	1,139,128	1,114,151	1,111,752
Nonintegrated ¹	257,841	268,374	296,971	289,856	267,251	276,196	275,467	276,131	282,026	283,261	285,083	267,114
Smelters ¹	65,351	67,875	69,231	70,708	63,462	59,618	60,412	63,172	63,759	68,487	73,464	73,813
Scrap	551,865	556,374	550,302	563,213	574,356	512,850	527,324	544,425	528,760	541,492	521,113	562,492
Integrated ¹	383,091	388,511	384,318	388,993	396,452	344,059	368,717	376,970	362,136	368,848	372,179	380,387
Nonintegrated ¹	106,639	103,688	101,826	103,619	102,942	105,969	96,566	101,826	98,237	108,620	75,104	99,124
Smelters ¹	62,135	64,175	64,158	70,601	74,962	62,822	62,041	65,629	68,387	64,024	73,830	82,981
All other	2,171,449	2,184,762	2,140,789	2,380,922	2,056,644	2,021,791	2,069,403	2,032,631	1,977,051	1,959,724	1,928,726	1,897,692
Integrated ¹	1,730,750	1,749,717	1,708,107	1,952,418	1,629,766	1,599,133	1,636,661	1,601,366	1,556,778	1,536,809	1,529,446	1,488,181
Nonintegrated ¹	440,699	435,045	432,682	428,504	426,878	422,658	432,742	431,265	420,273	422,915	399,280	409,511
Smelters ¹	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)

¹The number of companies reporting aluminum inventory data for December 1992 only are: "Ingot integrated" 13; "Ingot nonintegrated" 126; "Ingot smelters" 26; "Scrap integrated" 13; "Scrap nonintegrated" 127; "Scrap smelters" 25; "Other integrated" 12; "Other nonintegrated" 155; "Other smelters" 2.

²Data are combined to avoid disclosing figures for individual companies.

Table 15. GROSS SHIPMENTS OF ALUMINUM MILL PRODUCTS, BY TYPE OF PRODUCER AND MONTH: 1992

[Thousands of pounds]

Product description	Total			January			February		
	Total	Integrated	Noninte- grated	Total	Integrated	Noninte- grated	Total	Integrated	Noninte- grated
Total	14,016,149	10,046,404	3,969,745	1,156,613	830,060	326,553	1,107,997	791,315	316,682
Sheet and plate and foil	10,031,116	8,227,331	1,803,785	827,462	675,895	151,567	781,535	636,572	144,963
Drawing stock, wire, and cable	990,587	708,034	282,553	85,155	64,786	20,369	86,306	65,697	20,609
Rod and bare wire	429,258	341,000	88,258	38,414	31,020	7,394	37,930	30,929	7,001
Cable and insulated wire	561,329	367,034	194,295	46,741	33,766	12,975	48,376	34,768	13,609
Rod, bar, pipe, tube, and shapes ...	2,763,533	954,161	1,809,372	224,957	76,362	148,595	221,322	76,273	145,049
All other¹	230,913	156,878	74,035	19,039	13,017	6,022	18,834	12,773	6,061
Total	March			April			May		
	1,252,013	903,312	348,701	1,199,873	867,180	332,693	1,209,596	875,402	334,194
	895,790	735,287	160,503	853,216	703,991	149,225	882,299	726,077	156,222
	96,549	72,747	23,802	90,398	68,239	22,159	76,394	55,362	21,032
	40,428	32,467	7,961	38,627	31,527	7,100	38,934	31,541	7,393
	56,121	40,280	15,841	51,771	36,712	15,059	37,460	23,821	13,639
	238,794	81,316	157,478	238,784	84,031	154,753	231,710	81,443	150,267
	20,880	13,962	6,918	17,475	10,919	6,556	19,193	12,520	6,673
	June			July			August		
	1,201,734	867,107	334,627	1,187,024	855,727	331,297	1,150,037	818,345	331,692
	861,100	713,185	147,915	857,533	708,636	148,897	821,076	669,665	151,411
	79,681	57,494	22,187	74,675	53,482	21,193	80,381	56,634	23,747
	33,792	26,066	7,726	28,235	21,433	6,802	31,342	23,909	7,433
	45,889	31,428	14,461	46,440	32,049	14,391	49,039	32,725	16,314
	241,316	83,209	158,107	234,249	79,864	154,385	229,857	78,993	150,864
	19,637	13,219	6,418	20,567	13,745	6,822	18,723	13,053	5,670
	Total	September				October			
		Total	Integrated	Nonintegrated		Total	Integrated	Nonintegrated	
1,180,733		850,632	330,101		1,209,368	855,543	353,825		
846,370		693,760	152,610		859,698	701,490	158,208		
82,173		60,019	22,154		83,082	54,676	28,406		
38,514		30,811	7,703		36,280	28,700	7,580		
43,659		29,208	14,451		46,802	25,976	20,826		
232,056		82,332	149,724		246,374	85,558	160,816		
20,134		14,521	5,613		20,214	13,819	6,395		
November				December					
1,095,853		778,431	317,422		1,065,308	753,350	311,958		
782,374		641,868	140,506		762,663	620,905	141,758		
77,410		49,469	27,941		78,383	49,429	28,954		
33,626		26,645	6,981		33,136	25,952	7,184		
43,784		22,824	20,960		45,247	23,477	21,770		
217,868		74,371	143,497		206,246	70,409	135,837		
18,201		12,723	5,478		18,016	12,607	5,409		

Table 16. SHIPMENTS AND RECEIPTS OF ALUMINUM MILL PRODUCTS BY MONTH: 1992 and 1991
[Thousands of pounds]

Product description	Gross ship-ments	Receipts	Net shipments												No- vember	October	Sep- tember	August	July	June	May	April	March	February	January	Total	December
1992																											
Aluminum mill products.....	14,016,149	1,469,373	12,546,776	1,032,146	985,863	1,120,071	1,076,813	1,085,244	1,074,550	1,072,993	1,029,872	1,061,377	1,085,890	978,420	943,537												
Sheet, plate, and foil.....	10,031,116	1,060,184	9,032,366	746,088	696,396	806,132	771,250	793,118	772,003	776,705	734,512	764,472	777,899	704,593	689,198												
Sheet and plate.....	9,007,455	998,750	8,008,705	659,225	612,617	713,453	684,445	703,308	681,743	693,251	649,019	678,476	690,756	627,992	614,420												
Sheet.....	8,713,981	1,060,184	7,715,231	634,433	590,630	688,426	659,775	678,845	656,938	668,932	624,579	653,792	664,792	603,407	590,682												
Nonheat-treatable.....	8,517,695	1,998,750	7,518,945	615,618	574,896	671,843	644,513	663,001	641,102	652,596	608,399	635,652	649,008	588,613	573,704												
Heat-treatable.....	196,286	(¹)	196,286	18,815	15,734	16,583	15,262	15,844	15,836	16,336	16,180	18,140	15,784	14,794	16,978												
Plate.....	293,474	-	293,474	24,792	21,987	25,027	24,670	24,463	24,805	24,319	24,440	24,684	25,964	24,585	23,738												
Nonheat-treatable.....	103,135	-	103,135	8,289	7,816	8,224	9,506	8,476	9,073	8,407	8,611	7,724	9,041	9,343	8,625												
Heat-treatable.....	190,339	-	190,339	16,503	14,171	16,803	15,164	15,987	15,732	15,912	15,829	16,960	16,923	15,242	15,113												
Foil.....	1,023,661	-	1,023,661	86,863	83,779	92,679	86,805	89,810	90,260	83,454	85,493	85,996	87,143	76,601	74,778												
Rod, wire, and cable.....	990,587	321,538	669,049	54,794	61,592	67,075	61,705	52,429	53,443	53,361	59,472	57,350	54,814	50,325	42,689												
Rod and bare wire.....	429,258	321,538	107,720	8,053	13,216	10,954	9,934	14,969	7,554	6,921	10,433	13,691	8,012	6,541	-2,558												
Drawing stock (redraw wire).....	310,557	298,168	12,389	389	4,847	1,737	1,252	5,522	-2,006	-1,176	1,953	7,323	-1,072	1,282	-7,662												
Bare wire.....	118,701	223,370	95,331	7,664	8,369	9,217	8,682	9,447	9,560	8,097	8,480	6,368	9,084	5,259	5,104												
Cable and insulated wire.....	561,329	(²)	561,329	46,741	48,376	56,121	51,771	37,460	45,889	46,440	49,039	43,659	46,802	43,784	45,247												
ACSR and aluminum cable, bare.....	231,673	(²)	231,673	20,968	20,881	25,845	23,779	14,712	17,798	18,449	21,113	16,482	14,996	17,621	19,029												
Wire and cable, insulated or covered.....	329,656	(²)	329,656	25,773	27,495	30,276	27,992	22,748	28,091	27,991	27,926	27,177	31,806	26,163	26,218												
Rod, bar, pipe, tube, and shapes.....	2,763,533	149,085	2,614,448	212,225	209,041	225,984	226,383	220,504	229,467	222,360	217,165	219,421	232,963	205,301	193,634												
Rod and bar (rolled and extruded).....	264,990	149,085	115,905	9,881	7,699	10,139	17,429	10,949	10,588	9,022	8,992	9,544	8,877	6,509	6,276												
Alloys other than 2,000 and 7,000 series AND 7,000 series.....	264,990	³ 149,085	115,905	9,881	7,699	10,139	17,429	10,949	10,588	9,022	8,992	9,544	8,877	6,509	6,276												
Alloys in 2,000 and 7,000 series.....	261,905	(³)	261,905	22,822	22,316	23,902	22,381	22,307	22,851	20,978	20,975	21,752	23,406	19,248	18,967												
Pipe and tube (extruded and drawn).....	261,905	(³)	261,905	22,822	22,316	23,902	22,381	22,307	22,851	20,978	20,975	21,752	23,406	19,248	18,967												
Alloys other than 2,000 and 7,000 series AND 7,000 series.....	2,236,638	(³)	2,236,638	179,522	179,026	191,943	186,573	187,248	196,028	192,360	187,198	188,125	200,680	179,544	168,391												
Alloys in 2,000 and 7,000 series.....	2,159,544	-	2,159,544	172,458	173,064	184,867	180,387	180,646	189,605	185,969	180,519	181,435	193,664	173,925	163,005												
Extruded shapes.....	77,094	-	77,094	7,064	5,962	7,076	6,186	6,602	6,423	6,391	6,679	6,690	7,016	5,619	5,386												
Alloys other than 2,000 and 7,000 series.....	230,913	(³)	230,913	19,039	18,834	20,880	17,475	19,193	19,637	20,567	18,723	20,134	20,214	18,201	18,016												
Powder and paste.....	94,876	(³)	94,876	8,141	7,719	8,641	8,138	7,682	7,401	8,403	8,039	8,209	7,619	7,570	7,314												
Atomized.....	59,773	(³)	59,773	5,140	5,131	5,563	5,160	4,540	4,481	5,226	5,233	5,305	4,436	4,884	4,674												
Other flake, powder, and paste.....	35,103	(³)	35,103	3,001	2,588	3,078	2,978	3,142	2,920	3,177	2,806	2,904	3,183	2,686	2,640												
Forgings and impacts.....	136,037	(³)	136,037	10,898	11,115	12,239	9,337	11,511	12,236	12,164	10,684	11,925	12,595	10,631	10,702												
Forgings.....	107,731	-	107,731	9,048	8,610	9,545	6,965	8,907	9,651	9,017	8,531	9,703	10,023	8,887	8,844												
Impacts.....	28,306	(³)	28,306	1,850	2,505	2,694	2,372	2,604	2,585	3,147	2,153	2,222	2,572	1,744	1,858												

See footnotes at end of table.

Table 16. SHIPMENTS AND RECEIPTS OF ALUMINUM MILL PRODUCTS BY MONTH: 1992 and 1991—Continued
[Thousands of pounds]

Product description	Gross ship-ments	Receipts	Net shipments													
			Total	January	February	March	April	May	June	July	August	Sep-tember	October	No- vember	December	
1991																
Aluminum mill products.....	12,609,805	942,697	11,667,108	919,075	871,974	949,811	996,801	1,028,211	998,521	1,029,572	1,047,917	974,706	1,033,623	942,574	874,323	
Sheet, plate, and foil.....	8,945,872	605,633	8,340,239	645,396	625,950	681,125	711,169	740,757	716,378	739,006	750,843	698,584	728,708	676,026	626,297	
Sheet and plate.....	8,106,482	605,633	7,500,849	575,151	563,748	615,572	640,741	669,594	642,182	669,106	676,502	624,243	649,208	607,066	567,736	
Sheet.....	7,846,357	605,633	7,240,724	552,169	541,405	590,924	618,067	646,150	621,604	650,284	655,239	604,063	626,441	593,731	550,587	
Nonheat-treatable.....	7,596,925	1,605,633	6,991,292	530,280	520,610	568,290	595,737	625,710	601,286	629,720	633,181	593,985	604,860	584,163	533,429	
Heat-treatable.....	249,432	(¹)	249,432	21,889	20,795	22,634	22,330	20,399	20,318	20,564	22,118	20,078	21,581	19,568	17,158	
Plate.....	260,125	-	260,125	22,982	22,343	24,648	22,674	23,444	20,578	18,822	21,203	20,180	22,767	23,335	17,149	
Nonheat-treatable.....	77,692	-	77,692	6,763	6,629	8,655	7,797	7,255	6,315	4,715	5,167	5,779	6,373	6,996	5,248	
Heat-treatable.....	182,433	-	182,433	16,219	15,714	15,993	14,877	16,189	14,263	14,107	16,036	14,401	16,394	16,339	11,901	
Foil.....	839,390	-	839,390	70,245	62,202	65,553	70,428	71,163	74,196	69,900	74,341	74,341	79,500	68,960	58,561	
Rod, wire, and cable.....	966,010	301,866	664,144	61,967	50,034	55,325	53,087	55,461	52,951	51,621	57,457	51,279	64,814	49,582	60,566	
Rod and bare wire.....	402,852	301,866	100,986	11,307	1,277	7,348	3,628	7,310	5,435	7,666	11,958	10,144	15,560	3,694	15,659	
Drawing stock (redraw wire)...	317,980	289,744	28,236	5,057	-3,533	1,174	-2,436	1,253	-566	2,427	5,553	3,848	8,271	-2,925	10,113	
Bare wire.....	84,872	212,122	72,750	6,250	4,810	6,174	6,064	6,057	6,001	5,239	6,405	6,296	7,289	6,619	5,546	
Cable and insulated wire.....	563,158	(²)	563,158	50,660	48,757	47,977	49,459	48,151	47,516	43,955	45,499	41,135	49,254	45,888	44,907	
ACSR and aluminum cable, bare.....	256,217	(²)	256,217	25,841	24,324	21,882	21,578	21,098	21,262	18,319	20,038	16,896	22,060	21,149	21,770	
Wire and cable, insulated or covered.....	306,941	-	306,941	24,819	24,433	26,095	27,881	27,053	26,254	25,636	25,461	24,239	27,194	24,739	23,137	
Rod, bar, pipe, tube, and shapes...	2,462,438	35,198	2,427,240	193,135	178,039	191,968	210,748	210,628	208,993	218,383	219,153	206,246	221,155	198,413	170,379	
Rod and bar (rolled and extruded).....	226,904	35,198	191,706	18,269	16,063	16,539	16,097	16,777	13,827	16,080	17,133	15,299	16,784	16,257	12,581	
Alloys other than 2,000 and 7,000 series.....	146,732	335,198	111,534	9,643	8,784	8,388	9,154	9,490	8,252	9,367	10,496	9,346	10,129	10,382	8,103	
Alloys in 2,000 and 7,000 series.....	80,172	(³)	80,172	8,626	7,279	8,151	6,943	7,287	5,575	6,713	6,637	5,953	6,655	5,875	4,478	
Pipe and tube (extruded and drawn).....	291,756	(³)	291,756	23,567	22,932	23,793	26,027	25,716	24,390	29,571	24,883	23,742	24,737	22,812	19,586	
Alloys other than 2,000 and 7,000 series.....	265,725	(³)	265,725	21,518	20,854	21,720	23,504	23,400	22,546	27,439	22,861	21,479	22,309	20,549	17,546	
Alloys in 2,000 and 7,000 series.....	26,031	(³)	26,031	2,049	2,078	2,073	2,523	2,316	1,844	2,132	2,022	2,263	2,428	2,263	2,040	
Extruded shapes.....	1,943,778	-	1,943,778	151,299	139,044	151,636	168,624	168,135	170,776	172,732	177,137	167,205	179,634	159,344	138,212	
Alloys other than 2,000 and 7,000 series.....	1,779,810	-	1,779,810	137,452	124,940	136,323	154,078	153,503	157,007	160,421	163,577	154,271	165,063	146,797	126,378	
Alloys in 2,000 and 7,000 series.....	163,968	-	163,968	13,847	14,104	15,313	14,546	14,632	13,769	12,311	13,560	12,934	14,571	12,547	11,834	
All other.....	235,485	(³)	235,485	18,577	17,951	21,393	21,797	21,365	20,199	20,562	20,464	18,597	18,946	18,553	17,081	
Powder and paste.....	98,430	(³)	96,430	7,186	6,938	9,432	8,244	8,318	7,558	8,886	8,829	8,447	7,315	8,166	7,111	
Atomized.....	69,731	-	69,731	5,480	5,099	7,362	5,706	5,973	5,069	6,537	6,201	5,985	5,079	5,871	5,369	
Other flake, powder, and paste.....	28,699	(³)	28,699	1,706	1,839	2,070	2,538	2,345	2,489	2,349	2,628	2,462	2,236	2,295	1,742	
Forgings and impacts.....	139,055	-	139,055	11,391	11,013	11,961	13,553	13,047	12,641	11,676	11,635	10,150	11,631	10,387	9,970	
Forgings.....	110,664	-	110,664	9,218	8,590	9,534	10,492	10,309	10,150	9,401	9,280	7,901	9,433	8,468	7,890	
Impacts.....	28,391	-	28,391	2,175	2,423	2,427	3,061	2,738	2,491	2,275	2,355	2,249	2,198	1,919	2,080	

- Represents zero.

¹Receipts for "Heat-treatable sheet" are combined with "Nonheat-treatable sheet" to avoid disclosing figures for individual companies.²Data for "Cable and insulated wire" are included in "Bare wire" to avoid disclosing figures for individual companies.³Receipts for "Alloys in 2,000 and 7,000 series" are included in receipts for "Alloys other than 2,000 and 7,000 series" to avoid disclosing figures for individual companies.

HISTORICAL NOTE

Data on aluminum ingot and mill products have been collected by the Bureau of the Census since 1942. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

FUNDING

The M33D survey is conducted under the sponsorship of the Aluminum Association.

CONTACT FOR DATA USERS

For additional information about these data, contact Mary W. Ellickson, 301-763-7862.

6.4 NONFERROUS CASTINGS

INTRODUCTION

These data cover producers of nonferrous castings, whether for commercial sale or for use by the producing company.

The statistics were collected by mail on Bureau of the Census annual Form MA33E, Nonferrous Castings. The survey panel was first mailed for survey year 1984. It now consists of about 800 producers of nonferrous castings selected from approximately 2,500 establishments identified in the 1987 Census of Manufactures. The panel consists of 564 aluminum, 235 copper, 254 zinc, 39 magnesium, and 19-lead producing plants. The survey panel was selected as a cutoff sample representing 85 percent of the industry. In order to represent the universe, the statistics are inflated.

SUMMARY OF FINDINGS

During 1992, the total shipments of nonferrous castings were 2,879 million pounds. This represented a 4-percent increase over the 1991 total shipments of 2,760 million pounds. Shipments of aluminum castings in 1992 totaled 2,023 million pounds, showing a 6-percent increase over the 1991 total of 1,909 million pounds. Shipments of copper castings totaled 400 million pounds in 1992, a 2-percent decrease from the 1991 total of 408 million pounds. Shipments of zinc castings slightly increased during 1992 to 381 million pounds, compared with the 1991 total of 380 million pounds.

EXPLANATION OF TERMS

Shipments for Sale. Represents commercial sales only (castings shipped to the trade). Intra-company sales are not included in this category. Value figures represent only these shipments.

Shipments for Own Use. Represents castings shipped for use by the reporting company or by a subsidiary, parent, or other affiliated company. Castings produced and consumed at the same location in the production of finished products are also included.

Sand Casting. Castings produced by pouring molten metal into a sand mold and allowing it to solidify.

Permanent Mold Casting. Casting produced by introducing molten metal by gravity, or low pressure into a mold constructed of durable material, usually iron or steel, and allowing it to solidify.

Semipermanent Casting. Mold castings are made using an expendable core, such as sand.

Die Casting. Casting produced by introducing molten metal under high pressure into a metal mold or die and allowing it to solidify.

Centrifugal Casting. Castings produced by pouring molten metal into a spinning mold. Centrifugal force acts to distribute the metal uniformly around the interior of the mold.

Continuous Casting. Castings produced by introducing molten metal by gravity into a watercooled graphite die from which the solidified form is continuously drawn.

Table 17. PRODUCERS' SHIPMENTS OF NONFERROUS CASTINGS: 1973 TO 1992

[Thousands of pounds]

Year	By type of customer			By metal				
	Total	For sale	For own use	Copper and copper-base alloy	Aluminum and aluminum-base alloy	Zinc and zinc-base alloy	Magnesium and magnesium-base alloy	Lead and lead-base alloy die
1992	2,879,264	1,872,781	1,006,483	400,297	2,023,497	380,726	31,486	43,258
1991	2,760,195	1,823,874	936,321	408,441	1,908,789	379,985	24,657	38,323
1990	2,958,943	1,960,478	998,465	420,793	2,048,982	413,700	27,198	48,270
1989	3,200,048	2,106,649	1,093,399	474,463	2,193,928	461,736	23,583	46,338
1988	3,379,886	2,215,918	1,163,968	499,662	2,316,200	488,301	24,318	51,405
1987	3,260,020	2,150,491	1,109,529	477,352	2,220,223	492,544	22,803	47,098
1986	3,238,131	2,147,445	1,090,686	476,466	2,204,821	485,646	21,773	49,425
1985	3,281,111	2,194,695	1,086,416	470,006	2,229,776	510,844	24,858	45,627
1984	3,358,735	2,244,091	1,114,644	504,009	2,232,819	544,258	27,459	50,190
1983	2,967,235	2,019,569	947,666	498,271	1,898,139	489,170	26,460	55,195
1982	2,509,485	1,701,481	808,004	443,641	1,605,321	405,195	18,216	37,112
1981	2,915,961	2,018,280	897,681	564,225	1,819,781	471,338	22,836	37,781
1980	2,818,639	1,892,705	925,934	572,207	1,689,796	485,639	25,285	45,712
1979	3,765,121	2,462,222	1,302,899	726,055	2,302,840	664,502	28,211	43,513
1978	3,805,855	2,388,818	1,417,037	662,232	2,286,814	759,818	50,954	46,037
1977	3,676,579	2,159,246	1,517,333	641,944	2,153,449	788,699	57,770	34,717
1976	3,534,725	2,059,713	1,475,012	605,730	1,971,147	868,941	53,303	35,604
1975	2,877,535	1,738,517	1,139,018	630,542	1,455,158	712,329	37,961	41,545
1974	3,534,168	2,130,442	1,403,726	732,307	1,857,436	842,559	57,973	43,893
1973	4,115,822	2,371,335	1,744,487	819,504	2,113,201	1,079,692	54,383	49,042

Table 18. **QUANTITY AND VALUE OF SHIPMENTS OF NONFERROUS CASTINGS, BY TYPE AND METHOD OF CASTINGS: 1992 AND 1991**

[Quantity in thousands of pounds; value in thousands of dollars]

Product code	Product description	1992		1991	
		Quantity	Value	Quantity	Value
	Nonferrous castings	2,879,264	(NA)	2,760,195	(NA)
	For sale	1,872,781	4,431,280	1,823,874	4,337,255
	For own use	1,006,483	(NA)	936,321	(NA)
	Copper and copper-base alloy	400,297	(NA)	408,441	(NA)
	For sale	240,220	681,446	248,281	688,347
	For own use	160,077	(NA)	160,160	(NA)
	Sand	254,073	(NA)	260,763	(NA)
	For sale	142,686	(NA)	150,291	(NA)
	For own use	111,387	(NA)	110,472	(NA)
33660 31	Permanent and semipermanent mold ¹	43,152	(NA)	39,831	(NA)
33640 11	Die ¹	6,108	(NA)	7,780	(NA)
33660 41	Centrifugal ¹	34,810	(NA)	38,332	(NA)
33660 61	All other ¹	62,154	(NA)	61,735	(NA)
	Aluminum and aluminum-base alloy	2,023,497	(NA)	1,908,789	(NA)
	For sale	1,284,431	2,965,620	1,243,897	2,898,400
	For own use	739,066	(NA)	664,892	(NA)
33650 11	Sand	217,730	(NA)	207,820	(NA)
	For sale	197,924	(NA)	188,135	(NA)
	For own use	19,806	(NA)	19,685	(NA)
33650 31	Permanent and semipermanent mold ¹	436,181	(NA)	387,119	(NA)
33630 00	Die	1,310,717	(NA)	1,261,263	(NA)
	For sale	771,336	(NA)	774,602	(NA)
	For own use	539,381	(NA)	486,661	(NA)
33650 61	All other ¹	58,869	(NA)	52,587	(NA)
	Zinc and zinc-base alloy	380,726	(NA)	379,985	(NA)
	For sale	277,488	598,199	271,629	588,719
	For own use	103,238	(NA)	108,356	(NA)
33640 21	Die ¹	376,671	(NA)	375,252	(NA)
33690 11	All other ¹	4,055	(NA)	4,733	(NA)
	Magnesium and magnesium-base alloy	31,486	(NA)	24,657	(NA)
	For sale	31,486	146,875	24,657	131,979
	For own use	(¹)	(NA)	(¹)	(NA)
33690 15	Sand ¹	211,869	(NA)	28,814	(NA)
33640 31	Die ¹	19,617	(NA)	15,843	(NA)
33690 25	All other ¹	(²)	(NA)	(²)	(NA)
33640 41	Lead and lead-base alloy die	43,258	(NA)	38,323	(NA)
	For sale	43,258	39,140	38,323	29,810
	For own use	(¹)	(NA)	(¹)	(NA)

Note: Comparable data for Schedule B export numbers and HTUSA import numbers are not available.

(NA) Not available. ¹Revised by 5 percent or more from previously published figures.¹Castings for sale and for own use are combined to avoid disclosing figures for individual companies.²"All other magnesium and magnesium-base alloy castings" are combined with "Sand magnesium and magnesium-base alloy castings" to avoid disclosing figures for individual companies.**HISTORICAL NOTE**

Data on nonferrous castings have been collected by the Bureau of the Census since 1942. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Mary W. Ellickson, 301-763-7862.

6.5 INVENTORIES OF STEEL PRODUCING MILLS

INTRODUCTION

These data cover producers and steel service centers. Important nonmanufacturing activities, such as construction and mining, are not included.

The statistics are based on a survey of manufacturers and represent total U.S. inventories of steel mill shapes and forms. Estimates are included for companies whose reports were not received in time for tabulation.

Data for producers are based on information collected by mail on Bureau of the Census monthly Form M33J, Net Shipments and Inventories of Steel Mill Shapes and Forms (Producers Report), from companies that produce over 90 percent of total steel output. Estimates have been derived to represent 100-percent coverage of steel producers. These estimates are benchmarked annually to Current Industrial Reports Series MA33B, *Steel Mill Products*, the last being 1991.

SUMMARY OF FINDINGS

Total inventories of steel mill shapes and forms held by steel producers, and steel service centers (warehouses)

decreased from 20.3 million short tons at the end of December 31, 1991, to 18.8 million short tons in 1992.

Inventories held by steel service centers remained at the same level for 1992, and inventories held by steel producers decreased from 12.9 to 12.6 million short tons for 1992.

EXPLANATION OF TERMS

Steel Mill Shapes and Forms. Steel mill shapes and forms include ingot, semifinished shapes such as billets and wire rods, bar and bar shapes, sheet, strip plate, tinplate, terneplate, blackplate, wire, structural shapes, and piling.

Rough and machined castings and forgings, powder, and all fabricated steel products or components, such as purchased stampings, are excluded.

Table 19. **INVENTORIES OF STEEL MILL SHAPES AND FORMS HELD BY STEEL SERVICE CENTERS, STEEL PRODUCERS, AND RELATED STATISTICS: 1992 AND 1991**

[Million short tons]

Product description	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1992												
Total inventories	18.8	19.0	19.2	18.8	19.0	18.5	18.9	18.3	18.4	18.3	18.3	18.5
Steel service centers: ¹												
Inventories, end of month.....	5.9	6.0	6.1	5.8	5.9	5.8	6.0	5.4	5.8	5.8	5.8	5.9
Producing mills:												
Inventories, end of month.....	12.9	13.0	13.1	13.0	13.1	12.7	12.9	12.9	12.6	12.5	12.5	12.6
Steel in process.....	7.5	7.5	7.5	7.5	7.5	7.4	7.3	7.3	7.0	7.0	7.1	7.3
Finished steel.....	5.4	5.5	5.6	5.5	5.6	5.3	5.6	5.6	5.6	5.5	5.4	5.3
1991												
Total inventories	20.3	20.5	20.5	20.2	19.7	19.4	19.4	18.7	18.4	18.0	18.3	18.8
Steel Service centers: ¹												
Inventories, end of month.....	6.7	6.9	6.6	6.4	6.2	6.1	5.9	5.7	5.3	5.6	5.6	5.9
Producing mills:												
Inventories, end of month.....	13.6	13.6	13.9	13.8	13.5	13.3	13.5	13.0	13.1	12.4	12.7	12.9
Steel in process.....	7.9	7.9	8.3	8.4	8.1	8.1	8.2	7.7	7.7	7.2	7.2	7.5
Finished steel.....	5.7	5.7	5.6	5.4	5.4	5.2	5.3	5.3	5.4	5.2	5.5	5.4

¹See text for information on steel service center data derivation.

Table 20. **NET SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF STEEL MILL SHAPES: 1992 AND 1991**

[Thousands of short tons]

Month and year	Manufacturers' net shipments ¹	Imports for consumption ²
1992		
Total.....	81,832	16,678
December.....	6,572	1,510
November.....	6,512	1,570
October.....	7,090	1,472
September.....	6,934	1,350
August.....	6,786	1,585
July.....	6,693	1,559
June.....	7,105	1,432
May.....	6,751	1,414
April.....	6,949	1,274
March.....	7,101	1,091
February.....	6,472	1,048
January.....	6,867	1,373
1991		
Total.....	78,791	15,001
December.....	6,118	1,269
November.....	6,427	1,260
October.....	7,499	1,164
September.....	6,747	1,085
August.....	6,954	957
July.....	6,420	1,308
June.....	6,623	1,055
May.....	6,762	1,324
April.....	6,450	1,534
March.....	5,966	1,193
February.....	6,039	1,260
January.....	6,786	1,592

Note: Detail may not add due to independent rounding.

¹Source: American Iron and Steel Institute (AISI). The monthly data are based on data published by the AISI.²See footnote 4, table 21.

Table 21. **COMPARISON OF MANUFACTURERS' RECEIPTS AND CONSUMPTION WITH APPARENT CONSUMPTION OF STEEL MILL SHAPES, BY SELECTED YEARS: 1986 TO 1992**

[Thousands of short tons]

Product description	1992	1991	1990	1989	1988	1987	1986
Manufacturers' net shipments	¹ 81,832	² 78,255	² 84,931	² 92,320	² 95,338	² 82,156	² 76,139
Exports ³	(NA)	(NA)	(NA)	(NA)	(NA)	1,207	1,026
Imports ⁴	16,678	15,001	16,678	17,248	21,645	20,375	20,915
Apparent consumption ⁵	(NA)	(NA)	(NA)	(NA)	(NA)	101,354	95,435

(NA) Not available. ¹Revised by 5 percent or more from previously published figures.¹Source: American Iron and Steel Institute (AISI). Data from Current Industrial Report MA33B, *Steel Mill Products*, are not available.²Source: Current Industrial Report MA33B, *Steel Mill Products*. Net shipments figures are somewhat understated because of the method used to calculate these data. These figures are derived by subtracting total receipts of all mill shapes at producing mills from the total of shipments, consumption in fabricating operations and maintenance, repair, and operating supplies (MRO) of producing mills. Net shipments figures are somewhat understated because the receipts figures include imported steel received for further processing. (Beginning in 1980, import receipts are excluded from the net shipment calculation.) Such receipts by producing mills, e.g., wire rods, are subtracted although such quantities are not included in the shipments figures which represent only shipments by domestic producers.³Source: Bureau of the Census report EM 545, *U.S. Exports*. Export tonnage is derived from the following Schedule B numbers: 7206.10.0000-7306.90.5000.⁴Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*. Import tonnage is derived from the following 1992 HTSUSA numbers: 7206.10.0000-7306.90.5000.⁵Apparent consumption is derived by subtracting exports from the total of net shipments plus imports.**HISTORICAL NOTE**

Data on inventories of steel mill shapes have been collected by the Bureau of the Census since 1962. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Mary W. Ellickson, 301-763-7862 or Carol Beasley, 301-763-7353.

6.6 INSULATED WIRE AND CABLE

INTRODUCTION

These data cover companies engaged in manufacturing insulated wire and cable and/or fabricating appliance wire, cord, or flexible cordage from purchased insulated wire.

The statistics were collected by mail on Bureau of the Census annual Form MA33L, Insulated Wire and Cable. The survey panel includes all known insulators of wire and cable, as well as the largest producers of appliance wire, cord, and flexible cord sets from purchased insulated wire as measured by the dollar value of shipments from the 1987 Census of Manufactures. No estimate is included for the smaller fabricators. The total number of companies is approximately 220.

SUMMARY OF FINDINGS

In 1992, the total value of manufactures' shipments of insulated wire and cable increased by 4 percent to \$10,365 million, from the 1991 level of \$9,989. Electronic wire and cable increased by 1 percent to \$1,630 million, from the 1991 level of \$1,616 million. Telephone and telegraph wire and cable increased by 9 percent to \$1,635, from the 1991 level of \$1,502 million in 1992. Power wire and cable decreased by 2 percent to \$1,346, from the 1991 level of \$1,369 million. Control wire and signal wire and cable increased 10 percent to \$266 million, compared with the preceding year's figure of \$242 million. Building wire and cable decreased by 6 percent to \$2,010 million, from the 1991 level of \$2,136 million. In 1992, apparatus wire and cordage increased by 6 percent to \$849 million, from the \$804 million reported in 1991. Magnet wire also increased by 6 percent in 1992 to \$983 million, from the 1991 level of \$930 million. Insulated optical fiber cable increased by 31 percent to \$993 million, from the \$760 million in 1991. Other insulated wire and cable increased by 3 percent to \$651 million, compared with \$629 million in 1991.

EXPLANATION OF TERMS

Gross Weight. Includes insulating materials but excludes packaging materials.

AWG. American Wire Gauge.

Dual Rated Products. All dual rated products are classified according to their highest ratings.

Multi-Insulated Cables. All multi-insulated cables are classified according to their primary insulation, i.e., the layer of material designed to do the electrical insulating, usually the first layer of material applied over the conductor.

Insulated Wire and Cable. All insulated wire and cable for transmitting electrical energy, signals, or communications. Excludes bare and tinned wire and cable and Aluminum Cable Steel Reinforced (ASCR).

Magnet Wire (Including Insulating Magnet Strip Conductor). All insulated wire of the type generally used in the winding of coils, including Litz wire and including insulating magnet sheet, strip, and foil. The thermal classification for bondable wires are determined by the underlying insulation. Also, the combination (film fabric) product is classified based on the insulation on the top side.

Electronic Wire and Cable. All single and multiconductor wire and cable used for transmission, reception, or reproduction of electrical frequencies (16 gauge and smaller). Excludes telephone cable. See "apparatus wire and cable" for larger gauges.

Telephone Wire and Cable. All wire and cables used in the telephone industry to transmit, receive, and monitor communications signals. Excludes coaxial and other electronic wire and cable.

Power Wire and Cable. All insulated wire and cable used for the transmission and distribution of electrical energy. Excludes communications, aircraft, and marine types.

Control and Signal Wire and Cable. All insulated wire and cable used to transmit signals to control and actuate relays, valves, servo-mechanisms and related devices, including traffic control cable and fire alarm cable. Excludes elevator hatch and traveling cable.

Building Wire and Cable. All wire and cable (600 volts or less) having UL labels, used within structures for light and power.

Apparatus Wire and Cordage. Insulated wire and cable used in connecting electrical apparatus to a power source, and appliance wiring material (14 AWG and larger) used for internal wiring. See "electronic wire and cable" for appliances wiring material smaller than 14 AWG.

Other Insulated Wire and Cable. Includes bulk automotive battery and ignition wire, elevator hatch and traveling cable, airframe, shipboard, and ground support cable.

Table 22. SUMMARY OF SHIPMENTS OF INSULATED WIRE AND CABLE: 1992 AND 1991

[Value in thousands of dollars]

Product code	Product description	1992	1991
	Insulated wire and cable	10,364,531	9,989,008
3357A —	Electronic wire and cable	1,630,186	1,616,220
3357B —	Telephone and telegraph wire and cable.....	1,635,019	1,502,093
33578 —	Power wire and cable.....	1,346,414	1,368,970
3357C —	Control and signal wire and cable.....	266,286	241,640
3357D —	Building wire and cable	2,010,363	2,136,255
33576 —	Apparatus wire and cordage.....	849,475	804,360
3357E —	Other insulated wire and cable.....	650,836	629,304
33577 —	Magnet wire	982,992	930,426
33579 —	Optical fiber cable.....	992,960	759,740

Table 23. SHIPMENTS OF INSULATED WIRE AND CABLE: 1992 AND 1991

[Copper content in thousands of pounds; value in thousands of dollars]

Product code	Product description	Number of companies	Shipments, including interplant transfers ¹			
			1992		1991	
			Copper content ²	Value	Copper content ²	Value
3357A —	Electronic wire and cable	100	167,741	1,630,186	169,917	1,616,220
	Coaxial cable, armored or unarmored:					
3357A 10	Rigid	7	2,269	23,073	2,546	25,041
3357A 12	Semirigid	14	8,158	176,800	7,391	168,100
	Flexible:					
3357A 13	135 C and over	19	^a 1,776	^a 33,192	^f 1,908	34,655
3357A 14	Under 135 C	32	21,096	194,988	21,920	^f 245,102
3357A 16	CATV/broadcast coaxial cable AND	9				
3357A 22	Antenna lead-in wire	10	6,805	322,118	^f 6,040	260,675
	Hook-up wire (single conductor, shielded, and nonshielded):					
3357A 23	135 C and over temperature rating	32	10,353	142,987	10,483	147,065
3357A 25	Under 135 C temperature rating	47	26,228	129,320	^f 26,833	^f 140,773
	Multiconductor electronic wire and cable (shielded and nonshielded):					
3357A 30	Flat and ribbon cable	26	12,527	103,950	14,384	^f 100,833
	Other multiconductor electronic wire and cable:					
	Shielded:					
3357A 31	135 C and over temperature rating	22	24,118	^a 152,154	26,418	^f 151,937
3357A 33	Under 135 C temperature rating	42	34,984	221,823	33,094	^f 209,615
	Nonshielded:					
3357A 35	135 C and over temperature rating	13	^b 4,723	^b 34,746	4,144	^f 33,642
3357A 37	Under 135 C temperature rating	29	^a 14,704	^a 95,035	^a 14,756	^a 98,782
3357B —	Telephone and telegraph wire and cable	34	488,738	1,635,019	429,013	^f 1,502,093
3357B 41	Jumper and distributing frame wire AND	6				
3357B 43	Station wire and cable	14	18,345	81,532	14,349	66,411
3357B 73	Telephone cord sets and cordage	9	2,172	70,986	^f 2,056	75,860
3357B 52	Inside wiring cable	19	47,312	231,016	37,400	^f 178,694
3357B 55	Drop and bridle and duct wire AND	6				
3357B 68	Rural and urban distribution wire and cable	2	26,977	115,593	38,407	^f 172,585
3357B 73	Polyethylene covered exchange area and toll cable (PIC and PULP insulated)	10	356,321	959,806	^f 319,119	^f 932,897
3357B 90	Other telephone and telegraph wire and cable	9	37,611	176,086	^f 17,682	75,646
3357B —	Power wire and cable	36	273,387	1,346,414	274,656	1,368,970
3357B 07	Paper insulated cable (all voltages, all types)	4	16,131	49,392	17,642	57,651
	Plastic and rubber insulated:					
	600 volts or less:					
3357B 08	Portable welding cable	9	^a 16,288	^a 41,669	^a 21,588	^a 53,495
3357B 09	Portable molded and nonmolded cable and cord	8	18,864	75,447	^b 20,942	^b 82,814
3357B 17	Underground distribution cable (UD, URD)	10	7,539	176,898	^b 6,176	^a 164,865
3357B 19	Thermoplastic insulated power cable	17	15,932	47,578	^b 13,498	^a 39,952
	Thermoset insulated:					
3357B 20	Armored, rubber and cross-linked	9	5,325	16,533	6,519	19,780
3357B 21	Unarmored, rubber	9	37,545	126,249	36,154	128,962
3357B 22	Unarmored, cross-linked	13	15,760	52,179	19,447	60,865
3357B 25	Weatherproof cable	6	4,937	16,484	5,914	17,549
	Service drop cable:					
3357B 27	Thermoset insulated	7	2,715	65,486	2,544	54,362
3357B 28	Thermoplastic insulated	8	2,536	34,121	2,172	31,579
	Over 600 volts:					
3357B 32	Portable molded rubber sheathed cable (mine shovel cable)	5	5,579	20,870	5,658	21,509
3357B 35	Portable nonmolded cable	3	732	2,485	^c 658	^c 2,186
3357B 37	Underground distribution cable (UD, URD), all insulations (jacketed and unjacketed)	7	47,566	314,081	41,125	288,245
3357B 39	Thermoplastic insulated power cable, excluding underground	6	2,813	12,518	2,188	9,176
	Thermoset insulated power cable, excluding underground:					
	Over 600 volts to 15 kV:					
3357B 41	Armored, rubber and cross-linked	10	10,532	51,636	10,839	54,506
3357B 42	Unarmored, rubber	7	42,759	159,969	39,602	172,506
3357B 43	Unarmored, cross-linked	12	11,931	37,737	15,063	67,860

See footnotes at end of table.

Table 23. SHIPMENTS OF INSULATED WIRE AND CABLE: 1992 AND 1991—Continued

[Copper content in thousands of pounds; value in thousands of dollars]

Product code	Product description	Number of companies	Shipments, including interplant transfers ¹			
			1992		1991	
			Copper content ²	Value	Copper content ²	Value
33578 —	Power Wire and Cable--Cont. Plastic and rubber insulated-- Cont.: Over 600 volts--Cont.: Thermoset insulated power cable, excluding underground--Cont.: Over 15 kV (rubber and cross-linked).....	5	5,033	32,579	4,171	29,963
33578 44	Other power wire and cable	12	2,870	12,503	2,756	11,145
33578 50	Control and signal wire	33	39,167	266,286	34,656	241,640
3357C —	Signal wire and cable	21	15,740	^a 143,655	13,684	125,212
3357C 11	Control wire and cable, excluding elevator cable: Thermoset insulated	10	8,584	50,587	8,141	51,866
3357C 14	Thermoplastic insulated	17	14,843	72,044	^a 12,831	^a 64,562
3357C 17	Building wire and cable	28	1,100,251	2,010,363	1,114,541	2,136,255
3357D —	Building wire and cable having underwriters' labels: Thermoset insulated: Rubber (R, RH, RHH, RHW, USE, etc.)	5	5,910	11,286	3,446	7,484
3357D 36	Cross-linked polyethylene (XHHW)	16	39,744	^a 90,908	41,624	104,024
3357D 37	Cross-linked polyethylene (USE)	10	16,270	42,815	14,351	43,610
3357D 38	Thermoplastic insulated: Flame-retardant nylon (THHN, THWN)	18	646,203	1,042,682	^a 695,710	^a 1,168,915
3357D 40	Moisture resistant (TW)	6	395	730	587	1,193
3357D 41	Moisture and heat resistant (THW)	13	3,731	6,207	^a 6,778	^a 10,903
3357D 48	Service entrance cable (SER, SEU, ASE)	9	7,023	71,496	6,168	72,940
3357D 51	Nonmetallic branch-circuit and underground feeder: Type NM-B	8	325,308	575,902	286,380	533,054
3357D 54	Type UF and NMC (corrosion resistant)	10	30,156	61,491	27,387	60,383
3357D 55	Metallic armored cable (all AC types)	5	20,986	^a 92,715	^b 27,046	^b 118,477
3357D 57	Other building wire and cable	9	4,525	14,131	5,064	15,272
33576 —	Apparatus wire and cordage ³	59	182,357	849,475	175,222	804,360
33576 13	Flexible cordage: Thermoset insulated	10	^a 17,048	^a 80,639	^c 16,023	^c 75,738
33576 15	Thermoplastic, including thermoplastic elastomers	14	19,166	64,826	^a 19,146	^a 64,681
33576 42	Extension cord sets	11	23,930	171,537	27,642	172,295
33576 43	Fixed power supply cords	22	21,357	135,704	21,451	125,599
33576 44	Detachable power supply cords AND	8				
33576 47	Retractable power cords and other	8	20,099	103,791	19,983	103,937
33576 21	Apparatus wire: Appliance fixture wire	24	^a 46,717	^a 133,894	^a 41,022	^a 131,170
	Appliance wiring material 14 gauge and larger, including motor lead and transformer lead wire: Thermoset insulated	7	7,586	58,421	4,488	37,731
33576 23	Thermoplastic insulated	17	^b 14,966	^a 46,577	14,447	46,573
33576 24	Submersible pump cable	12	^a 5,531	^b 14,187	5,533	13,416
33576 28	Other apparatus wire and cordage, including toolwire	20	5,957	39,899	^a 5,487	^a 33,220
3357E —	Other insulated wire and cable	50	177,424	650,836	160,774	629,304
3357E 72	Automotive: Bulk automotive primary wire	17	107,972	229,985	91,802	199,546
3357E 74	Bulk battery cable	9	^b 9,541	^b 29,432	8,659	27,248
3357E 76	Bulk ignition wire	8	1,598	54,870	1,510	50,623
3357E 78	Other automotive wire and cable	10	10,260	40,888	12,078	41,700
3357E 79	Airframe, shipboard and ground support cable, excluding coaxial cable and ignition cable: Airframe and missile, including ground support cable	16	5,533	51,073	5,856	57,800
3357E 81	Shipboard cable	8	5,379	52,553	6,691	67,723
3357E 98	Other insulated or covered wire and cable, n.e.c. ...	26	37,141	192,035	^c 34,178	^c 184,664

Note: The percent of estimation of each item is indicated as follows: ^a10 to 25 percent of this item is estimated. ^b26 to 50 percent of this item is estimated. ^cOver 50 percent of this item is estimated.

(NA) Not available. n.e.c. Not elsewhere classified. ¹Revised by 5 percent or more from previously published figures.

¹Interplant transfers for 1992 totaled \$257,093, and for 1991 totaled \$282,527. See table 27 for additional details.

²Aluminum content for 1992 totaled 329,912 thousands of pounds and for 1991 totaled 292,717 thousands of pounds. See table 24 for additional details.

³Data include the following: (a) all known establishments that insulate wire and cable and then fabricate into finished products (SIC product code 33576), and (b) establishments from product code 36996 that manufacture wire, cord, and flexible cord sets from purchased insulated wire.

Table 24. ALUMINUM CONTENT OF SELECTED INSULATED WIRE AND CABLE: 1992 AND 1991

[Thousands of pounds]

Product code	Product description	Number of companies	1992	1991
3357A —	Electronic wire and cable AND	4		
33578 —	Power wire and cable	12	278,402	241,448
33578 17	Underground distribution cable, all insulations— 600 volts or less	5	105,130	90,621
33578 27	Service drop cable, thermoset insulated	4	37,292	27,870
33578 28	Service drop cable, thermoplastic insulated	3	18,903	16,483
33578 37	Underground distribution cable, all insulations— over 600 volts ..	7	43,881	38,917
33578 42	Thermoset insulated power cable, unarmored, rubber —over 600 volts to 15 kV AND	4		
33578 43	Thermoset insulated power cable, unarmored, cross-linked—over 600 volts to 15 kV	5	5,254	18,864
3357D —	Building wire and cable	8	46,449	47,262
3357D 38	Thermoset insulated, cross-linked polyethylene (USE)	4	9,192	10,015

¹Revised by 5 percent or more from previously published figures. (X) Not applicable.

Table 25. COPPER SHIPMENTS OF MAGNET WIRE, INCLUDING INTERPLANT TRANSFERS: 1992 AND 1991

[Copper gross weight in thousands of pounds; value in thousands of dollars]

Product code	Product description	Number of companies	Shipments, including interplant transfers ¹			
			1992		1991	
			Gross weight ¹	Value	Gross weight ¹	Value
33577 —	Magnet wire	(NA)	551,403	982,992	510,372	930,426
33577 1-	Class 105	(NA)	67,058	96,136	63,851	97,710
33577 11	7 Awg and larger round (also all square and rectangle)	5	6,504	9,833	8,722	13,917
33577 13	8 to 21 Awg inclusive	9	38,246	46,801	34,694	45,658
33577 15	22 to 32 Awg inclusive	10	20,819	34,830	19,108	33,878
33577 17	33 to 44 Awg inclusive	8	1,489	4,672	1,327	4,257
33577 2-	Class 130 and 155	(NA)	122,533	263,256	106,685	236,844
33577 23	8 to 21 Awg inclusive	10	29,788	47,106	27,276	44,567
33577 25	22 to 32 Awg inclusive	12	74,249	162,299	63,521	141,160
33577 28	33 to 44 Awg inclusive	9	18,496	53,851	15,888	51,117
33577 4-	Class 180 and higher	(NA)	314,871	511,167	293,486	486,116
33577 41	7 Awg and larger round (also all square and rectangle)	7	30,093	53,796	28,288	51,112
33577 43	8 to 21 Awg inclusive	11	194,037	286,431	176,857	265,759
33577 45	22 to 32 Awg inclusive	13	87,050	156,302	85,378	157,566
33577 47	33 to 44 Awg inclusive	9	3,691	14,638	2,963	11,679
33577 79	Miscellaneous film coated, n.e.c.	8	20,895	66,922	16,503	58,549
33577 pt.	Nonfilm coated (fibrous and tape)	(NA)	26,046	45,511	29,847	51,207
33577 81, 83	Class 130 and below	5	10,341	14,584	12,535	18,761
33577 85, 87	Class 155 and above AND	4				
33577 89	Miscellaneous non-film coated, n.e.c.	2	15,705	30,927	17,312	32,446

(NA) Not available. n.e.c. Not elsewhere classified. pt. Part.

¹Interplant transfers for 1992 totaled 63,778 thousands of pounds of copper and for 1991 totaled 59,409 thousands of pounds of copper.

Table 26. **ALUMINUM SHIPMENTS OF MAGNET WIRE, INCLUDING INTERPLANT TRANSFERS: 1992 AND 1991**

[Aluminum gross weight in thousands of pounds; value in thousands of dollars]

Product code	Product description	Number of companies	Shipments, including interplant transfers ¹			
			1992		1991	
			Gross weight	Value	Gross weight	Value
33577 —	Magnet wire	18	46,874	131,449	41,734	'110,836
3577 pt.	• Film coated	(NA)	42,769	123,052	37,156	'101,031
3577 1-	Class 105 AND	8				
3577 2-	Class 130 and 155	4	18,211	59,256	14,279	'43,839
3577 4-	Class 180 and higher	5	24,558	63,796	22,877	'57,192
3577 pt.	Other types of magnet wire (nonfilm coated; insulated magnet sheet, strip, and foil; and film coated, 45 AWG and finer)	5	4,105	8,397	4,578	'9,805

(NA) Not available. pt. Part. 'Revised by 5 percent or more from previously published figures.

¹Interplant transfers for 1992 totaled 11,855 thousands of pounds of aluminum and for 1991 totaled 11,247 thousands of pounds of aluminum.Table 27. **VALUE OF INTERPLANT TRANSFERS OF SELECTED INSULATED WIRE AND CABLE: 1992 AND 1991**

[Thousands of dollars]

Product code	Product description	Number of companies	1992	1991
3357 pt.	Insulated wire (except magnet wire)	(X)	257,093	'282,527
3357A —	Electronic wire and cable	12	32,822	32,435
3357B —	Telephone and telegraph wire and cable	6	56,406	57,509
33578 —	Power wire and cable	6	69,861	72,467
3357C —	Control and signal wire and cable	3	462	716
3357D —	Building wire and cable	4	9,152	11,879
33576 —	Apparatus wire and cordage	8	70,705	70,350
3357E —	Other insulated wire and cable	7	17,685	'37,171

pt. Part. 'Revised by 5 percent or more from previously published figures. (X) Not applicable.

Table 28. **VALUE OF SHIPMENTS OF FIBER OPTIC CABLE AND OPTICAL FIBER: 1992 AND 1991**

[Thousands of dollars]

Product code	Product description	Number of companies	1992	1991
33579 —	Insulated optical fiber cable	(X)	992,960	759,740
33579 pt.	Communication applications	(X)	958,688	733,786
	Single-mode stepped-index:			
33579 12	Dispersion shifted AND	4		
33579 13	Dispersion unshifted	13	869,154	649,621
33579 14	Multi-mode stepped index AND	4		
33579 15	Multi-mode graded index	17	89,534	'84,165
33579 21	Other applications	11	34,272	'25,954
32318 95	Optical fiber for data and nondata transmission	(X)	622,712	'496,144
32318 97	Optical fiber used for data transmission AND	15		
	Optical fiber used for nondata transmission	14	622,712	496,144

'Revised by 5 percent or more from previously published figures. (X) Not applicable.

Table 29. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF INSULATED WIRE AND CABLE: 1992 AND 1991**

[Value in thousands of dollars]

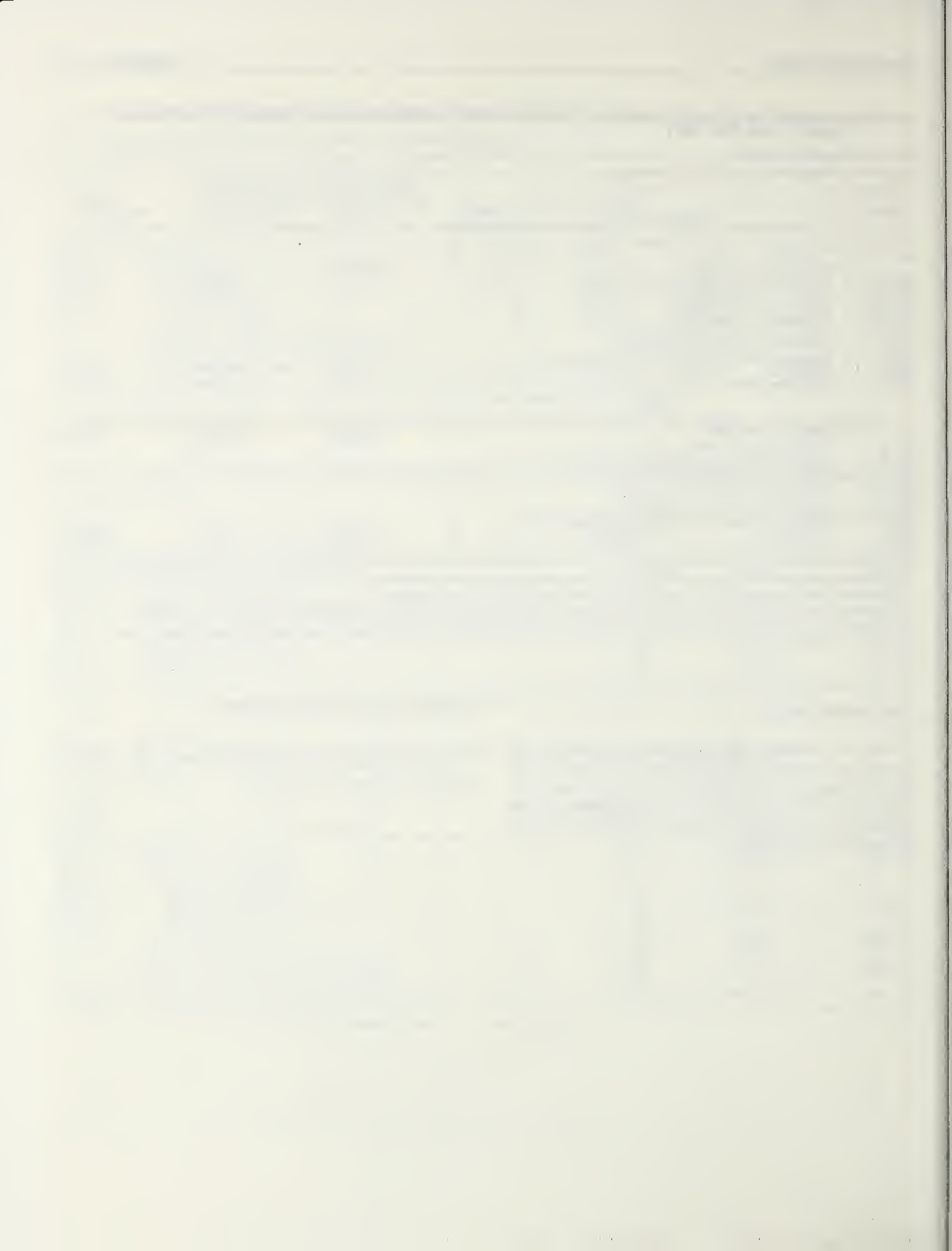
Product code	Product description	Manufacturers' shipments (value f.o.b. plant)	Exports of domestic merchandise (value at port) ^{1 2}	Imports for consumption ^{3 4}
1992				
	Insulated wire and cable.....	9,994,283	1,380,741	1,350,385
3357A —	Electronic wire and cable.....	1,630,186	225,908	123,747
3357B —	Telephone and telegraph wire and cable AND			
33578 —	Power wire and cable ⁵ AND			
3357D —	Building wire and cable AND			
3357C —	Control and signal wire and cable AND			
3357E —	Other insulated wire and cable AND			
33576 —	Apparatus wire and cord and flexible cord sets AND			
33577 —	Magnet wire.....	7,741,385	861,949	1,160,239
33579 —	Optical fiber cable.....	622,712	292,884	66,399
1991				
	Insulated wire and cable.....	9,725,412	1,350,083	1,201,465
3357A —	Electronic wire and cable.....	1,616,220	183,797	112,021
3357B —	Telephone and telegraph wire and cable AND			
33578 —	Power wire and cable ⁵ AND			
3357D —	Building wire and cable AND			
3357C —	Control and signal wire and cable AND			
3357E —	Other insulated wire and cable AND			
33576 —	Apparatus wire and cord and flexible cord sets AND			
33577 —	Magnet wire.....	7,613,048	1,083,857	1,057,017
33579 —	Optical fiber cable.....	496,144	82,429	32,427

¹Source: Bureau of the Census report EM 545, *U.S. Exports* (see appendix B, for a comparison of SIC-based codes and import and export numbers).²This dollar value represents the c.i.f. (cost, insurance, and freight) value to port of export.³Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*. These figures include both import value and duty value.⁴These import data include other items such as Christmas tree lights, ignition harness sets, and ignition wiring sets.⁵The manufacturers' shipments for "Power wire and cable" include "Mineral and paper insulated cable," while the export figures do not.**HISTORICAL NOTE**

Data on insulated wire have been collected by the Bureau of the Census since 1965. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Mary W. Ellickson, 301-763-7862.



Chapter 7. ELECTRONICS

7.1 COMPUTERS AND OFFICE AND ACCOUNTING MACHINES

INTRODUCTION

These data cover manufacturers of computers and office and accounting machines, except very small firms (generally less than 10 employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies. The statistics were collected by mail on Bureau of the Census annual Form MA35R, Computers and Office and Accounting Machines. The survey panel includes all known producers of these products except the very small firms excluded from the scope of the survey. Approximately 1,300 companies are included. No estimate is derived for the small firms excluded from the scope of the survey.

SUMMARY OF FINDINGS

In 1992, manufacturer's shipments of computers were valued at \$27,190.0 million, an increase of 3 percent from the 1991 total of \$26,274.1 million. Computer storage devices and equipment were valued at \$6,055.5 million in 1992, an increase of 8 percent from the 1991 total of \$5,609.7. Loaded computer processor boards and board subassemblies were valued at \$14,224.8 million in 1992, an increase of 13 percent from the 1991 total of \$12,590.4 million. Magnetic and optical recording media were valued at \$3,999.5 million in 1992, an increase of 3 percent from the total of \$3,894.4 million in 1991.

EXPLANATION OF TERMS

Computers. These automatic data processing units are capable of: (1) performing arithmetic computations, (2) processing data in accordance with a processing program, (3) immediately storing the processing program and the data necessary for execution of the processing program, and (4) executing a processing program without human intervention, on the basis of instructions contained in the program, to automatically modify execution by logical decision during the performance of processing tasks.

General-Purpose Computers. A computer designed to solve a large variety of problems, e.g., a stored program computer which may be adapted to any of a very large class of applications.

Digital Computers. A computer which processes information represented by combinations of discrete or discontinuous data, compared with an analog computer for continuous data. More specifically, it is a device for performing sequences of arithmetic and logical operations. Still more specifically, it is a stored program digital computer capable of performing sequences of internally stored instructions, as opposed to calculators, on which a sequence is impressed manually.

Analog Computers. A computer that represents variables by physical analogies. Thus, any computer that solves problems by translating physical conditions such as flow, temperature, pressure, angular position, or voltage into related mechanical or electrical equivalent circuits as an analog for the physical phenomenon being investigated. In general, it is a computer which uses an analog for each variable and produces analogs as output. Thus, an analog computer measures continuously; whereas, a digital computer counts discretely.

Hybrid Computer. A computer designed with both digital and analog characteristics, combining the advantages of analog as well as digital computers, when working as a system. Hybrid computers are used extensively in simulation process control systems where it is necessary to have a close representation with the physical world. The hybrid system provides better precision than can be attained with analog computers and greater speed than is possible with digital computers, plus the ability to accept input data in either form.

Special-Purpose Computers. A special-purpose computer is a general-purpose computer programmed and/or configured to operate upon a restricted class of problems.

Peripheral Equipment for Computers. In a data processing system, any equipment, distinct from the processing unit, that may provide the system with outside communication or additional facilities. Includes input/output typewriter and displays sold as part of a large office system. Included are:

Input/Output Equipment. Terminals include those units which, in addition to their capabilities of displaying data or accepting data input, are capable of performing other functions such as stamping approvals for bank account withdrawals, time stamping, and issuing receipts. A unit is included if it meets all of the following conditions:

1. It is connectable to the processing unit either directly or through one or more other units;
2. It is specifically designed as part of such a system. (It must in particular, unless it is a power supply unit, be able to accept or deliver data in a form (code or signals) which can be used by the system.)

Computer Storage Devices. Storage in addition to the main storage of a computer; e.g., magnetic tapes, disks, or magnetic drums. Auxiliary storage usually holds much larger amounts of information than the main storage, and the information is accessible less rapidly.

Computer Terminals. A point at which information can enter or leave a computer communication network. An input/output device to send or receive data in an environment associated with the job to be performed, capable of transmitting entries to and obtaining output from the computer system of which it is a part.

Cash Registers. Stand-alone electronic devices, including adding device with cash drawer and excluding terminals which have interactive communication capabilities. Firmware based, fixed or parameterized function devices developed primarily for cash control, with limited transaction or merchandise information as a byproduct.

Fund Transfer Device. Devices facilitating the handling of various financial transactions involving the consumer and financial institutions. Typically, these devices provide services such as account status inquiries, transfers of funds to and from various accounts, withdrawals, deposits, and payments.

Point-of-Sale Devices. Devices facilitating the handling of various retail transactions involving the sale, exchange, or return of merchandise or service.

Accounting Machines. A keyboard actuated machine that prepares accounting records. A machine that may read data from external storage media such as cards or tapes, and automatically produces accounting records or tabulations, usually on continuous forms.

Calculating Machines. Devices requiring manual means for entering numerical data for performance of arithmetic operations. These machines, by nature, require frequent

operator intervention. A calculator uses separate, fixed storage areas for its programs and for the storage of data. These machines cannot execute programs that modify themselves during their execution. There are two major classifications of these machines: printing calculating machines print one or more of the significant elements of computation; non-printing calculating machines display one or more of the significant elements of computations. Includes both three-and four-operation printing calculators. Three-operation printing calculators are those incorporating short-cut multiplication and/or fully "automatic multiplication" and division.

Duplicating Machines. A machine in which an ink image on a master is transferred onto a copy paper.

Postage Franking Machines. Machines that print a design in place of the postage stamp. The machine has a non-reversible totalling device which adds up the total value of the postage printed. In addition, the machine can often be used for other printing on the envelope; e.g., advertising slogans.

Dictating, Transcribing, and Recording Machines and Systems. Machines that are designed as office machines for conference recording, combination dictating, and telephone recording used to produce a written record, but excluding home-type wire and tape recorders. A single recording unit with a number of dictating stations should be counted as one unit or system. A system consists of a recorder and a transcribing unit with more than one dictating station.

Standard Typewriters. Machines, electric or nonelectric, designed solely for preparation of documents with letter printlike characters and symbols which are operated manually by consecutive depressing of keyboard keys. A typewriter contains a four-row keyboard, including alpha and numeric as well as special symbols. It may or may not include special attachments to be used in the preparation of addresses or other stencils, braille typing for the blind, and similar materials. In addition, it may or may not include special carriages, pin-feed platens, and other devices used to increase the speed of the typing on continuous forms. Machines which include accounting registers are excluded.

Bar Code. An array of rectangular bars and spaces arranged in a predetermined pattern, following unambiguous rules in a specific way, to represent elements of data which are referred to as characters.

Code Reader or Scanner. A device that examines a spatial pattern, one part after another, and generates analog or digital signals corresponding to the pattern. The major components of a bar code scanner are an illumination source, a photodetector device and a microcomputer.

A focused light beam is moved across the symbol (bar code), the reflected light is received by the photodetector, which in turn generates a voltage (analog signal) that is proportional to the amount of light reflected by the signal. The signal from the photodetector is conditioned by pre-processor circuitry before being presented to the micro-computer for analysis.

Decoder. An electronic package that receives the signals from the scanner, and then performs the algorithm to interpret the signals into meaningful data and provides the interface to other devices.

Optical Character Recognition (OCR). Relies on a sensor to differentiate between light-reflecting background and printed data that do not reflect light. Output from the sensor is fed to a set of recognition logics, and then forwarded to the computer.

Magnetic Strip. Records, or encodes, information onto a material, using low or high energy electromagnetic charges.

These charges or signals can then be read by a decoder that translates them into numbers and characters for identification by a computer.

Radio Frequency. A system based on the ability of an identification tag (transponder) to receive radio frequency signals and output a code to a reader.

Voice Recognition. A computer recognizes words in a preprogrammed vocabulary. The operator speaks the words into a microphone, and the word or phrase is recognized by the machine and converted into electronic impulses for the micro or host computer.

Machine Vision. Devices used for optical non-contact sensing to receive and interpret automatically an image of a real scene, to obtain information and/or to control machines or processes.

Image Processor. Selects and interprets data to determine an object's position, location, shape, and size.

Table 1. VALUE OF SHIPMENTS OF COMPUTERS AND OFFICE AND ACCOUNTING MACHINES: 1986 TO 1992

[Millions of dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986
3571X	Electronic computers	27,190.0	26,274.1	25,630.1	25,076.9	23,787.4	23,212.6	20,025.7
35713	Large-scale processing equipment	5,536.4	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
35714	Medium-scale and small-scale processing equipment	3,111.1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
35715	Personal computers and workstations ..	16,023.9	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
35716	Portable computers	1,330.7	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
35717	Other general-purpose digital processing units	493.5	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
35718	Other computers, typically specialized for an application, including array, database, and image processors, computer chassis, and other analog, hybrid, or special-purpose computers ..	694.4	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
36798	Loaded computer processor boards and board subassemblies ²	14,224.8	12,590.4	2,247.2	2,854.3	4,339.0	4,565.1	4,810.3
35721	Computer storage devices and equipment	6,055.5	5,609.7	7,488.2	7,215.3	7,548.4	6,332.9	6,249.8
35722	Parts for computer storage devices and subassemblies	1,132.3	780.4	955.2	686.5	831.2	554.0	140.8
35751	Computer terminals	1,697.6	1,729.5	2,066.7	2,759.2	2,672.6	2,429.2	3,265.9
35752	Parts for computer terminals	209.3	417.0	362.9	208.3	233.6	123.0	225.4
35771	Computer peripheral equipment, n.e.c. .	8,478.2	7,763.6	7,696.6	8,271.1	7,385.0	7,695.7	7,498.4
35772	Parts for input/output equipment	3,126.1	4,186.9	3,705.5	3,647.1	4,345.3	4,230.7	3,579.5
35784	Calculating and accounting machines ³ .	984.5	973.5	(D)	(D)	(D)	(D)	1,029.0
35789	Parts for calculating, coin, or currency handling, and accounting machines ⁴ ..	74.4	97.4	133.3	155.9	70.1	99.9	159.6
35792	Automatic typing and word processing machines	465.2	417.1	342.5	533.1	566.7	1,197.2	1,183.9
35793	Duplicating machines	(D)	(D)	(D)	159.9	152.8	125.9	168.9
35795	Mailing, letter-handling, and addressing machines	1,148.5	1,124.8	976.9	767.3	811.7	800.9	768.4
35799	Check handling, electric stapling and dictating machines, typewriters, and all other office machines, n.e.c.	499.9	517.6	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
3579A	Parts for office machines, n.e.c.	261.4	199.2	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
36950	Magnetic and optical recording media ..	3,999.5	3,894.4	3,965.4	3,672.8	3,149.7	3,226.3	2,964.9

(D) Data withheld to avoid disclosing figures for individual companies. n.e.c. Not elsewhere classified. ¹Revised by 5 percent or more from previously published figures.

¹Prior to 1992, product code separation for computers is not available.

²"Computer parts," product code 35712, was considered to be "Printed circuit assemblies (loaded boards, subassemblies and modules)" and recoded to product code 36798 in 1991.

³Product codes 35781 and 35782 were combined into product code 35784 in 1991.

⁴Product code 35783 was changed to product code 35789 in 1991.

⁵Data withheld for years prior to 1991 due to change in product description.

Table 2. QUANTITY AND VALUE OF SHIPMENTS OF COMPUTERS AND OFFICE AND ACCOUNTING MACHINES: 1992 AND 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991'	
			Quantity	Value	Quantity	Value
3571—	Electronic computers (automatic data processors).....	185	(X)	27,189,967	(X)	26,274,061
	General-purpose digital units by (MLP) ¹	130	10,044,443	26,495,604	7,488,059	25,317,798
3571X 41	Under \$1,000 (MLP)	28	4,635,809	1,830,968	3,311,064	1,989,420
3571X 43	\$1,000 to \$4,999 (MLP)	68	4,416,221	9,490,511	3,391,827	8,203,437
3571X 45	\$5,000 to \$14,999 (MLP)	54	794,361	5,726,648	529,007	3,681,539
3571X 47	\$15,000 to \$49,999 (MLP)	41	171,095	2,450,040	219,778	3,712,117
3571X 49	\$50,000 to \$249,999 (MLP)	41	21,961	2,108,106	29,233	2,796,740
3571X 51	\$250,000 to \$1,000,000 (MLP)	23	3,225	1,162,957	4,694	1,058,111
3571X 53	Over \$1,000,000 (MLP)	12	1,771	3,726,374	2,456	3,876,434
	General-purpose digital units by type	130	10,044,443	26,495,604	7,488,059	25,317,798
35713 00	Large-scale processing equipment (64 megabytes in MINIMUM main memory configuration)	27	78,776	5,536,418	(NA)	(NA)
35714 00	Medium-scale and small-scale processing equipment (up to 64 megabytes in MINIMUM main memory configuration), excluding personal computers and workstations	38	141,509	3,111,104	(NA)	(NA)
35715 00	Personal computers and workstations, excluding portables	77	8,468,727	16,023,874	(NA)	(NA)
35716 00	Portable computers (typically with attached display, e.g., laptops, notebooks, palmtops)	25	1,173,084	1,330,677	(NA)	(NA)
35717 00	Other general-purpose digital processing units	19	182,347	493,531	(NA)	(NA)
35718 00	Other computers, typically specialized for an application, including array, database, and image processors, computer chassis, and other analog, hybrid or special-purpose computers, excluding supercomputers, LAN servers, and engineering workstations	70	(S)	694,363	(S)	956,263
36798 XX	Printed circuit assemblies (loaded boards, sub-assemblies and modules):					
	Loaded computer processor boards and board subassemblies by (MLP) ^{1 2}	336	(X)	14,224,827	(X)	12,590,386
36798 31	Under \$1,000 (MLP)	19	(X)	597,860	(X)	282,721
36798 33	\$1,000 to \$4,999 (MLP)	15	(X)	404,933	(X)	270,661
36798 35	\$5,000 to \$14,999 (MLP)	11	(X)	71,381	(X)	86,068
36798 37	\$15,000 to \$49,999 (MLP) AND	6				
36798 39	\$50,000 to \$249,999 (MLP) AND	2				
36798 41	\$250,000 to \$1 million (MLP)	1	(X)	86,877	(X)	178,554
36798 43	Over \$1,000,000 (MLP)	-	-	-	-	-
36798 15	Computer processors (systems boards, array processors, etc.)	48	(X)	2,036,204	(X)	2,632,111
36798 11	Memory boards, including boards for adding memory to peripherals	83	(X)	2,311,997	(X)	2,033,389
36798 13	Peripheral controller boards (e.g., graphics boards, I/O controllers)	71	(X)	1,463,407	(X)	652,916
36798 17	Instrumentation boards (e.g., D/A converters, frequency counters)	35	(X)	2,125,802	(X)	2,033,952
36798 19	Communication boards (e.g., FAX, modems, LAN adaptors)	69	(X)	716,034	(X)	615,115
36798 21	Other board level products for use within a computer system	23	(X)	844,532	(X)	771,998
36798 22	Other boards	87	(X)	2,210,779	(X)	1,981,313
36798 29	Receipts for contract work by contract assemblers, board stuffers, and related job shops	69	(X)	1,355,021	(X)	1,051,588
35721 —	Computer storage devices and equipment	89	4,679,291	6,055,548	3,810,549	5,609,701
	Rigid magnetic disk drives:					
	Less than \$5,000 (MLP) each:					
35721 35	Less than 2-1/2 inches AND	4				
35721 37	2-1/2 inches up to but not including 3-1/2 inches	3	130,907	32,187	108,796	28,040
35721 39	3-1/2 inches up to but not including 5-1/4 inches	19	1,150,244	684,029	934,691	504,140
35721 41	5-1/4 inches and greater	24	709,809	1,135,704	789,256	1,235,544
35721 43	\$5,000 (MLP) or more	10	62,610	1,197,978	68,731	1,315,095
35721 45	Disk subsystems and disk arrays for multiuser computer systems	20	83,046	642,827	15,601	343,613

See footnotes at end of table.

Table 2. QUANTITY AND VALUE OF SHIPMENTS OF COMPUTERS AND OFFICE AND ACCOUNTING MACHINES: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991'	
			Quantity	Value	Quantity	Value
35721 —	Computer storage devices and equipment—Cont.					
35721 47	Flexible magnetic disk drives.	9	457,260	65,621	263,852	53,335
	Optical disk drives, including CD-ROM and magneto-optical equipment:					
	CD-ROM:					
35721 51	"Juke-box" capable of handling multiple disks AND	7				
35721 53	Single-disk equipment.	7	313,171	127,635	211,279	99,734
35721 55	WORM (write once, read many times).	7	6,518	40,924	8,826	37,023
35721 57	Rewritable.	6	(D)	(D)	(D)	(D)
35721 59	Optical subsystems for multiuser computer systems.	5	25,956	64,909	11,908	14,133
	Auxiliary storage, not disc- or tape-based, for multiuser computer systems:					
35721 61	Encased or enclosed in a housing, enclosure, or cabinet.	5	(D)	(D)	(D)	(D)
35721 63	Other.	-	-	-	-	-
35721 65	Other direct-access storage equipment.	12	103,960	215,530	108,431	267,928
	Serial access storage equipment (e.g., tape drives):					
35721 71	1/2-inch tape drives.	12	142,414	577,005	169,213	606,941
35721 73	1/4-inch tape drives.	15	713,219	303,907	497,042	226,480
35721 75	Helical scan tape drives AND	5				
35721 77	Cassette tape drives.	4	197,988	283,530	138,873	223,480
35721 79	Other serial access storage equipment.	13	525,510	617,206	471,322	603,754
35722 11	Computer storage parts and subassemblies.	26	(X)	1,132,337	(X)	780,382
35751 —	Computer terminals.	72	3,868,871	1,697,555	3,281,810	1,729,507
35751 80	Remote batch terminals.	8	38,562	74,236	30,031	67,103
35751 61	Teleprinters.	11	121,036	230,143	209,005	346,593
	Display terminals, including graphics type, whether or not incorporating a printing mechanism:					
35751 63	X-terminals.	17	302,809	382,838	353,810	330,744
	Other than X-terminals:					
35751 65	13 inch or less display.	12	234,119	78,139	217,408	76,532
35751 67	More than 13-inch but less than 19-inch display.	27	3,117,422	841,443	2,406,324	820,804
35751 69	19-inch or more display.	14	54,923	90,756	65,232	87,731
35752 41	Computer terminal parts and subassemblies.	21	(X)	209,289	(X)	416,988
35771 —	Computer peripheral equipment, n.e.c.	238	(X)	8,478,242	(X)	7,763,557
	Keying equipment:					
35771 33	Keyboards AND	20				
35771 35	Other keying equipment.	5	22,481,305	636,004	15,618,678	576,145
35771 02	Mouse devices AND	9				
35771 04	Digitizers and light pen tablets.	9	7,209,138	244,190	4,786,308	193,204
35771 06	Other manual input devices (joysticks, trackballs, touchscreens, etc.)	6	574,705	32,310	337,215	23,638
35771 08	Computer output to microfilm (COM) equipment AND	3				
35771 12	Media copying and/or conversion equipment.	4	13,858	86,661	19,051	93,359
	Optical scanning devices:					
35771 14	Bar code devices.	27	761,072	471,677	862,650	496,906
35771 16	OCR equipment.	18	328,960	189,791	267,532	182,477
	Other than bar code or OCR devices:					
35771 18	Flat bed scanners.	9	151,952	129,419	72,397	74,854
35771 22	Hand-held scanners.	4	26,468	8,401	28,093	10,989
35771 24	Other.	14	168,362	92,730	115,989	92,547
35771 26	Voice recognition equipment.	9	15,139	23,458	9,944	26,820
35771 28	Magnetic strip and ink recognition equipment.	9	36,541	97,744	12,537	84,742
35771 29	Other document entry equipment.	1	(D)	(D)	(D)	(D)
	Computer printers:					
	Impact printers:					
35771 74	Line type (typically with a Centronics interface with output measured in lines per minute)	14	490,432	362,887	281,078	373,949
35771 72	Serial type (typically with a serial and/or parallel interface with output measured in characters per second)	27	637,030	944,359	829,112	806,308

See footnotes at end of table.

Table 2. QUANTITY AND VALUE OF SHIPMENTS OF COMPUTERS AND OFFICE AND ACCOUNTING MACHINES: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991'	
			Quantity	Value	Quantity	Value
35771 —	Computer peripheral equipment, n.e.c.—Cont. Computer printers—Cont. Nonimpact printers: Laser:					
35771 41	Under \$15,000 (MLP) AND	26				
35771 43	\$15,000 (MLP) and over.....	9	1,833,182	2,419,309	1,326,192	2,163,193
35771 45	Other (inkjet, thermal, ion deposition, etc.).....	20	1,426,500	741,980	520,272	504,509
35771 47	Peripheral sharing devices.....	9	383,674	227,072	318,344	293,725
35771 49	Font cartridges.....	3	4,162	617	(D)	(D)
	Plotters, including electrostatic:					
35771 51	Under \$15,000 (MLP).....	8	47,360	356,100	58,612	439,439
35771 53	\$15,000 (MLP) and over.....	4	2,321	70,126	(D)	(D)
35771 55	Monitors, excluding terminals: Flat panel displays.....	7	150,223	89,645	121,199	103,114
	Other than flat panel displays (e.g., CRT):					
35771 56	Less than 19-inch display.....	23	386,323	149,926	385,423	171,227
35771 58	19-inch or more display.....	12	239,709	162,314	210,771	103,245
35771 62	Monitor screen projection devices (e.g., LCD panels).....	4	(D)	(D)	29,747	63,804
35771 63	All other input/output devices.....	63	(X)	521,697	(X)	564,567
35771 68	Accessories for computer peripherals (e.g., device supports and ergonomic aids).....	38	(X)	321,540	(X)	305,876
35772 00	Parts and subassemblies for computer peripherals and input/output equipment.....	65	(X)	3,126,130	(X)	4,186,786
35784 —	Calculating and accounting machines.....	45	(X)	984,476	(X)	973,536
35784 54	Funds transfer devices ³	8	(³)	(³)	29,622	224,716
35784 55	Point-of-sale terminals ³	19	245,488	748,940	255,951	508,673
35784 16	Machines for sorting, wrapping, counting, changing, or dispensing coins and/or currency.....	9	324,651	129,585	301,928	124,957
35784 59	Other coin or currency handling machines, including cash registers, calculators, accounting, bookkeeping and billing machines, and credit card imprinters.....	16	(X)	105,951	(X)	115,190
35789 00	Parts for calculating, coin or currency handling, and accounting machines.....	18	(X)	74,392	(X)	97,404
35792 00	Automatic typing and word processing machines (all types).....	5	2,323,331	465,158	1,733,614	417,116
35793 00	Duplicating machines.....	5	(D)	(D)	(D)	(D)
35795 —	Mailing, letter handling, and addressing machines.....	30	906,433	1,148,535	1,116,022	1,124,777
35795 34	Forms handling equipment, including bursters, decollators, and imprinters.....	9	491,334	53,481	604,651	53,856
35795 37	Mailing machines, including postage franking machines ⁴	12	(⁴)	(⁴)	482,496	816,606
35795 43	Letter and envelope handling machines ⁴	14	401,883	994,677	18,930	174,093
35795 48	Other mailing, letter handling, and addressing machines.....	11	13,216	100,377	9,945	80,222
35799 —	Other office machines, n.e.c.....	50	(X)	499,932	(X)	517,623
35799 31	Check handling machines.....	10	58,747	75,270	71,660	72,024
35799 32	Electric stapling machines, office type.....	3	177,773	8,502	176,764	13,850
35799 33	Time recording and time stamp machines.....	13	247,309	99,369	228,948	101,654
35799 41	Paper cutting machines and apparatus, office type AND	5				
35799 44	Paper shredders.....	2	521,701	31,220	476,082	30,088
35799 45	Perforating or stapling machines, nonelectric.....	6	5,382,514	45,344	5,231,155	47,615
35799 95	All other office machines, not elsewhere classified, including pencil sharpeners, typewriters, dictating machines, binding machines, ticket counting machines, and voting machines.....	25	(X)	240,227	(X)	252,392
3579A 00	Parts for office machines, not elsewhere classified...	31	(X)	261,420	(X)	199,170

See footnotes at end of table.

Table 2. **QUANTITY AND VALUE OF SHIPMENTS OF COMPUTERS AND OFFICE AND ACCOUNTING MACHINES: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991 ¹	
			Quantity	Value	Quantity	Value
36950 —	Magnetic and optical recording media.....	57	(X)	3,999,538	(X)	3,894,393
	Rigid disks:					
36950 12	Less than 2-1/2 inches AND	3				
36950 14	2-1/2 inches up to but not including 3-1/2 inches .	6	(S)	41,414	(S)	63,808
36950 16	3-1/2 inches up to but not including 5-1/4 inches .	9	(S)	531,605	(S)	511,593
36950 18	5-1/4 inches and greater	10	(S)	226,331	(S)	274,587
	Flexible disks:					
36950 22	3-1/2 inches up to but not including 5-1/4 inches .	12	(S)	455,130	(S)	339,053
36950 24	5-1/4 inches and greater	15	(S)	195,745	(S)	222,297
36950 09	Optical disks AND	8				
36950 26	Bulk magnetic tape	3	(S)	222,337	(S)	186,797
	Packaged magnetic tape:					
36950 11	In reels for computer use.....	8	(S)	115,050	(S)	125,213
36950 13	In cassette and cartridge for computer use	19	(S)	641,374	(S)	560,694
36950 28	In forms suitable for audio use	10	(S)	270,180	(S)	282,975
36950 21	In video cassette, 8-mm and 1/2-inch.....	9	(S)	750,989	(S)	803,047
36950 23	In video cassette, 3/4- (19-mm) and 2-inch (51-mm)	3	(S)	94,602	(S)	102,237
36950 34	Other package magnetic tape AND	3				
36950 39	Other magnetic recording media, including parts	18	(X)	454,781	(X)	422,092
	Nonmanufacturing revenue of manufacturing establishments:					
50650 00	Supplies and accessories for use with computers or business machines (resales)	46	(X)	885,578	(X)	687,527
99980 49	Research and development, testing, and evaluation of systems and components	23	(X)	142,628	(X)	132,911
	Software sold with computer systems shipped by manufacturers:					
73721 00	Operating system software	23	(X)	150,838	(X)	143,207
73722 00	Utilities and device managers AND	9				
73723 00	Application software AND	26				
73724 00	Other software	8	(X)	188,083	(X)	57,968
73730 00	Systems integration revenues, including configuration, installation and site preparation, and custom programming.....	11	(X)	78,975	(X)	(D)
73700 00	Other nonmanufacturing revenues associated with computer systems.....	73	(X)	1,258,144	(X)	1,277,369

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. classified. ¹1991 data have been revised to the new product code changes created in 1992. standards of the Bureau of the Census. (X) Not applicable.

(NA) Not available. n.e.c. Not elsewhere (S) Suppressed. Data did not meet publication

¹MLP Manufacturer's list price.

²These data are collected on two Current Industrial Report forms, MA35R, *Computer and Office and Accounting Machines*, and MA36Q, *Semiconductors, Printed Circuit Boards, and Other Electronic Components*.

³Data for product code 35784 55 were combined with product code 35784 56 in 1992.

⁴Data for product code 35795 37 were combined with product code 35795 43 in 1992.

Table 3. SHIPMENTS, EXPORTS, IMPORTS AND APPARENT CONSUMPTION OF COMPUTING AND ACCOUNTING MACHINES: 1992

[Quantity in thousands of units; and value in millions of dollars]

Product code ¹	Product description	Manufacturers' shipments (f.o.b. plant)		Exports of domestic merchandise ¹		Imports for consumption ^{1 3}	
		Quantity	Value	Quantity	Value at port ²	Quantity	Value in foreign country
35713 00-35718 00	Computers, digital, analog, hybrid, and other	(X)	27,190.0	2,187.4	7,859.7	5,393.8	4,808.7
35721 47	Flexible magnetic disk drives	457.3	85.6	283.8	130.8	24,738.1	1,091.0
35721 35, 37, 39, 41, 43, 45	Rigid magnetic disk drives, including disk sub-systems and disk arrays	2,136.6	3,692.7	1,834.3	1,564.0	22,224.1	6,197.8
35721 51, 53, 55, 57, 59, 61, 63, 65, 71, 73, 75, 77, 79	Computer storage devices and equipment, n.e.c. . .	2,085.4	2,297.2	981.2	1,403.9	2,763.1	1,325.9
35771 41, 43, 45, 72, 74	Computer printers	4,387.1	4,468.5	1,338.1	1,058.1	9,654.0	3,212.9
35771 33	Computer keyboards	(D)	(D)	478.0	114.1	15,628.9	434.1
35751 61, 63, 65, 67, 69, 80	Computer terminals	3,868.9	1,697.6	417.9	417.1	447.4	113.1
35771 56, 58	Monitors, CRT-type	626.0	312.2	815.4	409.2	13,618.7	3,721.4
35771 55, 62	Monitors, n.e.c.	(NA)	(NA)	143.9	109.6	1,720.2	420.9
35771 14, 16, 18, 22, 24, 28	Optical scanning devices and magnetic strip and ink recognition equipment	1,473.4	989.8	298.5	273.1	677.0	116.7
35771 02, 04, 06, 08, 12, 26, 29, 35, 47, 49, 51, 53, 63	Computer equipment, n.e.c.	(X)	⁴ 2,201.7	2,189.4	1,130.2	15,664.9	496.3
35771 68, 35772 00	Parts, subassemblies, and accessories for computers and computer peripheral equipment.	(X)	3,447.7	(X)	9,938.4	(X)	9,310.3
35793 00	Duplicating machines	(D)	(D)	9.9	20.4	27.0	53.3
35784 55	Point-of-sales terminals	(X)	(⁵)	40.4	71.2	828.5	141.3
35784 16, 54, 59	Coin or currency handling machines, n.e.c., including cash registers, accounting, bookkeeping, and billing machines, and credit card imprints	(X)	⁵ 3,126.1	414.8	128.2	77,094.3	714.4
35789 00	Parts for calculating, coin, or currency handling, and accounting machines	(X)	74.4	(X)	349.4	(X)	216.4
35792 00	Automatic typing and word processing machines (all types)	2,323.3	465.2	184.3	68.1	805.3	80.5
35795 00	Mailing, letter handling, and addressing machines	906.4	1,148.5	108.3	93.3	125.8	66.3
35799 33	Time recording and time stamping machines	247.3	99.4	102.7	13.0	415.7	3.6
35799 31-32, 41, 44-45, 95	Office machines, n.e.c.	(X)	400.6	2,615.3	142.9	21,780.3	341.4
3579A 00	Parts for office machines, n.e.c.	(X)	261.4	(NA)	118.5	(NA)	98.1
36950 09, 12, 14, 16, 18, 22, 24	Rigid, flexible, and optical disks	(X)	(⁶)	(NA)	1,057.2	948,344.5	430.1
36950 11, 13, 21, 23, 26, 28, 34	Bulk and packaged magnetic tape	(X)	(⁶)	8,201.0	618.4	546,011.9	1,253.9
36950 39	Other magnetic recording media, including parts . .	(X)	⁶ 399.5	(NA)	67.1	(NA)	148.1

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. n.e.c. Not elsewhere classified. (X) Not applicable.

¹For comparison of SIC-based product codes with Schedule B export numbers and HTSUSA import numbers, see appendix B.²Source: Bureau of the Census report EM 545, *U.S. Exports*.³Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.⁴Includes data for product code 35771 33.⁵Includes data for product code 35784 55.⁶Includes data for all product codes in product class 36950.

HISTORICAL NOTE

Data on computers and office and accounting machines have been collected by the Bureau of the Census since 1953. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Michael Narod, 301-763-2529.

7.2 SWITCHGEAR, SWITCHBOARD APPARATUS, RELAYS, AND INDUSTRIAL CONTROLS

INTRODUCTION

These data cover manufacturers of switchgear, switchboard apparatus, relays, and industrial controls, except very small firms (generally less than 20 employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies.

The statistics were collected by mail on Bureau of the Census annual Form MA36A, Switchgear, Switchboard Apparatus, Relays, and Industrial Controls. The survey panel includes all known producers of these products, except the very small firms excluded from the scope of the survey. Approximately 720 companies are included. No estimate is derived for the small firms excluded from the survey.

SUMMARY OF FINDINGS

During 1992, the total value of shipments of switchgear and switchboard apparatus was \$4,946.4 million, up 1 percent from the 1991 value of \$4,919.4 million. The 1992 shipments include power circuit breakers valued at \$393.2 million, an increase of 7 percent from 1991; low voltage panelboards, valued at \$1,612.6 million, a decrease of 2 percent from 1991; fuses and fuse equipment, valued at \$412.8 million, an increase of 1 percent from 1991; molded case circuit breakers, valued at \$963.3 million, an increase of 5 percent from 1991; duct, valued at \$189.1 million, an increase of 3 percent from 1991; and switchgear valued at \$1,375.4 million, a decrease of 2 percent from 1991. The value of shipments of general-purpose relays totaled \$769.8 million in 1992, a decrease of less than 1 percent from the 1991 value of \$772.0 million. Specific-purpose industrial controls, valued at \$2,098.4 million, increased 5 percent from 1991. General-purpose industrial controls, valued at \$2,783.0 million, decreased 3 percent from 1991. Motor controller accessories increased by 2 percent to \$442.8 million in 1992, from \$434.1 million in 1991.

EXPLANATION OF TERMS

Relay. A device that is operative by a variation in the conditions of one electric circuit to effect the operation of other devices in the same or another electric circuit.

Control Relay. A relay which functions to initiate or to permit the next desired operation in a control circuit or scheme.

Overload Relay. A relay which functions at a predetermined value of current (overcurrent relay).

Busway. A prefabricated electric distribution system consisting of bus bars in a protective enclosure together with associated fittings. All busways include, as a minimum, bus bars, some supporting means for these bars, and a housing around them.

General Industry Controls

Industrial Control Pushbuttons, Selector Switches, Pilot Lights, and Foot Switches (All Voltages). Ac or dc manually operated devices designed primarily to operate in the control circuits of industrial applications. Includes control stations, reed devices, and rotary switches with control circuit ratings. Excludes metal mill and crane accessories and similar items incorporated into products covered by other categories (such as conversion kits for starters, and those designed for aircraft, appliances, business machines, computers, or elevator applications).

Industrial Control Relays (All Voltages). Ac and dc operated electromagnetic relays designed primarily to perform logic functions and/or operate in the control circuits of industrial applications. Includes reed devices and relays which carry ratings in addition to those applicable to control circuits and relays with mounted timer attachments. Excludes timer attachments sold separately, relays designed for use with metal mill or crane control, and relays incorporated in products covered by other categories. Also excludes relays designed for military applications or for the appliance or television industries.

Motor Controller Accessories. Items which are sold separately but become part of a motor controller. Includes overload relays, auxiliary contacts, heater elements, mechanical interlocks, control transformers, kits to add pushbuttons, selector switches, pilot lights, separate control enclosures and enclosure fittings, and reset mechanisms. Excludes motor circuit switches sold separately.

Ac Full Voltage, Noncombination Magnetic Starters (1,000 Volts or Less). Electromagnetic switches with overload protection rated in amperes, horsepower, or kilowatts for application at full voltage with nonsynchronous motors. Includes open and enclosed; single and multiple-speed; reversing and nonreversing; electrically, mechanically, or magnetically held; ac or dc operated; and controls for one or more squirrel cage or wound rotor motors. Excludes those starters which qualify for any specific application item.

Ac Full Voltage, Combination Magnetic Starters (1,000 Volts or Less). Electromagnetic switches, with or without overload protection combined with a disconnect device, rated in amperes, horsepower, or kilowatts for application at full voltage with nonsynchronous motors. Includes open and enclosed; single and multiple-speed; reversing and nonreversing; electrically, mechanically, or magnetically held; ac or dc operated; and controls for one or more squirrel cage or wound rotor motors. Variations include those with fusible or nonfusible disconnect switch or circuit breaker; and those with oil well, irrigation, or other pumping applications. Excludes those starters which qualify for any specific application item.

Disconnect Switches (600 volts or less). A 600-volt rated switch intended primarily to be used with electric motor controls, and, where available, fault currents greater than 10 kA RMS symmetrical are likely to be encountered. The device may be hp and ampere rated, and may meet the requirements for service entrance disconnecting means. "Safety Switches" are not included in this category.

Ac Full Voltage Manual Controllers (1,000 Volts or Less). Manual switches with or without overload protection, with or without disconnect devices, rated in amperes, horsepower, or kilowatts for application at full voltage with nonsynchronous motors. Includes open and enclosed, single- and multiple-speed, reversing and nonreversing, and controls for one or more squirrel cage or wound rotor motors. Variations include toggle switches, drum switches, and loom switches. Excludes those devices which qualify for any specific application item.

Solid-State Controllers. All primarily solid-state devices designed to operate in power circuits and directly control the single phase or polyphase power delivered to motors, ovens, furnaces, or other power-consuming devices should be reported as an ac device, 1,000 volts or less. Included are solid-state starters and contactors, solid-state reduced voltage (current) controllers which control motor acceleration from rest to rated speed, and solid-state deceleration (braking) controllers. Excluded are those solid-state current sensing devices such as overload relays with outputs that operate in control circuits and are sold separately, resistance welding controls, adjustable speed drive controls, and any other product which qualifies for inclusion in other specific application or general industry control categories.

Ac Magnetic Contactors (1,000 Volts or Less). Electromagnetic switches without overload protection and without disconnect devices rated in amperes, horsepower, or kilowatts. Includes open and enclosed; single- and multiple-speed; reversing and nonreversing; electrically, mechanically, or magnetically held; ac or dc operated, for lighting, heating, motor, power distribution, or high frequency applications.

Ac Reduced Voltage Magnetic or Manual Controllers (1,000 Volts or Less). Magnetic switches with or without overload protection, with or without disconnect devices, rated in amperes, horsepower, or kilowatts, which start nonsynchronous motors at reduced voltage. Includes open and enclosed, single- and multiple-speed, reversing and nonreversing types. Variations include controllers with primary or secondary resistor, reactor, auto-transformer, partwinding, and stardelta starters. Excludes those devices which qualify for any specific application item.

Synchronous Motor Controllers (1,000 Volts or Less). Armature and field controls for synchronous motors, starting at full or reduced voltage. Excludes those devices which qualify for any specific application item.

Motor Control Centers (1,000 Volts or Less). Factory-built and customer assembled control centers, including the sections and units sold separately.

Medium Voltage Nonsynchronous and Synchronous Motor Controllers (Over 1,000 Through 7,200 Volts). Manual and magnetic devices for the control of squirrel cage, wound rotor, and synchronous motors. Includes open and enclosed, combination and noncombination, full or reduced voltage, reversing and nonreversing air brake, vacuum brake, and oil immersed starters and contactors. Excludes those devices which qualify for any specific application item.

Positioning Switches (All Voltages). Ac or dc switches and sensors which respond to movement or position. Includes mechanical and air operated limit switches, proximity switches, photoelectric sensors and relays, and cam switches. Excludes those devices used in or covered by solid-state control systems or specific application items.

Industrial Control Timers (All Voltages). Mechanically or electrically operated (ac or dc) timers primarily used to operate in logic and control circuits of industrial applications. Includes timing attachments used with contactors or relays; motor driven, pneumatic, and electronic timing relays; time delay relays; and under voltage time delay relays. Excludes relays with timer attachments mounted and timers designed as solid-state logic units or for metal mill or crane applications or incorporated in products covered by other categories.

Resistors and Rheostats. Separate components and assemblies of carbon and metal resistors designed to function in a power or motor field circuit. Includes manual and motor operated rheostats, cast and wound metal resistors, and carbon-pile resistors. Excludes resistors designed for use in electronic circuits.

Miscellaneous General Application Devices (All Voltages). Mechanical and electrical devices (ac or dc) designed for general industrial application that do not qualify for classification in any other category and are not used in products covered by any other category. Includes pressure, vacuum, temperature, and liquid level switches; phase or frequency sensitive relays; solenoids; magnetic unloaders; gas engine cutouts; saturating shunt; control circuit master switches; control circuit fuse blocks; sealed switches (plugging and anti-plugging); zero speed switches; motion deflectors; dimmers; and dynamic braking controls sold separately.

Dc Power Circuit Devices (All Voltages). Manual and magnetic devices sold separately for the control of dc power. Includes open and enclosed; combination and noncombination; full or reduced voltage; reversing or nonreversing air brake; and oil immersed dc power circuit devices. Excludes those devices which qualify for any specific application item.

Ac or dc Friction Brakes and Clutches (All Voltages). All devices used to engage or control motion by slowing or stopping, provided the clutch or brake is operated or released electrically. Braking or clutch action may be controlled mechanically, hydraulically, or magnetically, using shoes or discs. Excludes dynamic braking controls.

Specific Application or Specific Industry Controls

Ac or dc Control Panels (All Voltages). Assemblies and components in which the principal power circuits are ac or dc, for applications other than welding, marine auxiliaries, crane, hoist, or adjustable speed drives. Excludes panels which have the outputs controlled by solid-state digital logic. Specifically includes analog controllers, furnace and lifting magnet controls, regulators, and motor controls which provide for plugging and/or dynamic braking.

U.S. Coast Guard, Navy, and Marine Auxiliary Controls and Accessories (All Voltages). Controllers and accessories designed to meet the requirements of the U.S. Navy, U.S. Coast Guard, and similar specifications for marine auxiliary control. Includes all ac or dc versions of such power circuit or control circuit devices for application above or below deck except adjustable speed drive controls and solid-state digital logic systems for marine applications.

Crane and Hoist Controls (All Voltages). Ac or dc control assemblies designed to control hoist, trolley, and/or bridge motion for application in mines, traffic-carrying bridges, elevators, and general industry. Includes crane protective panels, hoist or crane master switches, and adjustable speed drives for these purposes. Excludes crane and hoist controls for marine applications, pendant control stations, and other accessories sold separately.

Definite Purpose Contactors and Starters (600 Volts or Less). Definite purpose full voltage contactors and starters, including open and enclosed devices. Including, but not limited to, heating loads, lighting loads, refrigeration, solid-state starters, and contactors.

Numerical Controls for Machine Tools Positioning. Numerical controls activated by direct data input, punched tape, punched cards, magnetic tape, cassette, or manual data input. Includes all controls in which point-to-point positioning and cutting or forming (regardless of the

number of movement axes or auxiliary functions) are controlled automatically by means of numerical programs inserted into the systems. If a machine control permits positioning and continuous path operations, it is classified as continuous path.

Continuous Path or Computer Numerical Control. Numerical program controls activated by direct data input, e.g., punched tape, punched cards, magnetic tape, cassette, or manual data input. Includes all machine controls with which the path is processed by point-to-point positioning; the path is automatically controlled by means of numerical programs inserted into the systems. If a machine control permits positioning and continuous path operations, it is classified as continuous path.

Digital Readout Systems, Including Dial or Plugboard. Digital readout systems or dial or plugboard type of prerecorded motion program control systems. Includes all controls in which positioning or continuous path are automatically commanded by numerical programs fed into the system by an operator through dials, plugs, switches, or any other numerical method.

Resistance Welding Control, All Voltages. Controllers and accessories for resistance welding. Includes contactors, timing devices, and electronic and solid-state analog and digital controls. Excludes control for arc welding.

Metal Mill Control and Accessories (All Voltages). Any ac or dc power or control circuit device designed for and sold separately for metal mill applications. Includes master switches, limit switches (power or control circuit), timers, and relays.

Other Specific Purpose Equipment (All Voltages). Any industrial control equipment designed for a specific application which is not covered by any other category, such as aircraft contractors and controllers rated 601 V up to 2200 V, dynamic braking controls sold separately, dimmers, and automatic transfer switches.

Ac and dc Adjustable Speed Drive Controls (All Voltages). The control portion of adjustable (regulated) speed drives for controlling motors by adjusting voltage or adjusting frequency. Includes single- and multimotor drive controls, eddy current coupling drives, all elements of the power units (except motor generators), and all auxiliary controls sold as part of the drive system. Excludes rotating equipment.

All Other General Industry Devices and Systems. Solid-state digital panels using either wired or retentive memory logic to provide data or control processes or machine functions systems which are not elsewhere classified.

Table 4. **VALUE OF SHIPMENTS OF SWITCHGEAR, SWITCHBOARD APPARATUS RELAYS, AND INDUSTRIAL CONTROLS: 1983 TO 1992**

[Millions of unadjusted dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
36132	Power circuit breakers	393.2	368.5	387.6	393.4	386.0	372.8	377.9	377.5	415.2	380.8
36133	Low-voltage panelboards	1,612.6	1,642.6	1,722.3	1,747.2	1,663.5	1,569.3	1,552.0	1,607.4	1,510.1	1,334.0
36134	Fuses and fuse equipment	412.8	409.4	419.3	418.5	390.3	367.6	362.1	368.8	368.1	306.9
36135	Molded case circuit breakers	963.3	916.6	959.4	952.4	948.2	879.2	925.6	935.1	993.3	929.7
36136	Duct, 1,000 volts and under	189.1	184.2	193.6	187.8	152.2	131.9	140.8	148.0	133.0	124.8
36138	Relays, control circuit	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	421.8	429.5	485.0	491.5
36139	Switchgear (except ducts)	1,375.4	1,398.1	1,323.9	1,319.3	1,100.0	1,048.8	1,046.9	988.2	1,000.5	1,020.5
36251	Relays, general-purpose ²	769.8	772.0	804.7	834.6	873.2	888.7	876.5	634.2	609.6	523.8
36252	Specific-purpose industrial control	2,098.4	1,992.7	2,019.6	1,927.6	1,808.3	1,731.6	1,708.7	1,746.8	1,737.1	1,333.8
36253	General-purpose industrial controls	2,783.0	2,878.6	2,911.5	2,970.5	2,655.2	2,402.6	2,252.4	2,190.5	2,268.6	1,976.8
36254	Motor controller accessories and parts for industrial controls	442.8	434.1	452.4	502.7	458.5	429.4	442.7	380.5	384.9	392.9

¹In 1987, data formerly included in product code 36138 were switched to product classes 36139, 36251, and 36254. Data for product code 36138 31 are now included in product code 36139. Data for product code 36138 34 are now included in product class 36251. Data for product code 36138 44 are now included in product code 36254.

²Prior to 1986, data for product code 36251 (formerly 36794), "General purpose relays," were collected on survey MA36N, *Selected Electronic and Associated Products*.

Table 5. SHIPMENTS OF SWITCHGEAR, SWITCHBOARD APPARATUS, RELAYS AND INDUSTRIAL CONTROLS: 1992 and 1991

[Quantity in thousands of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36130 —	Switchgear and switchboard apparatus.....	(NA)	(X)	4,946,415	(X)	4,919,390
36132 —	Power circuit breakers, and parts, all voltages.....	23	(X)	393,216	(X)	368,426
36132 16	Power circuit breakers (sold separately) for use in metal-clad switchgear oil and oilless, over 1,000 volts, (number of breakers).....	7	(X)	21,386	(X)	21,401
36132 17	Parts for power circuit breakers for use in metal-clad switchgear.....	4	(X)	(¹)	(X)	(¹)
36132 21	Power circuit breakers, free-standing, oil and oilless, from 15.5 kV 15 through 800 kV and above (number of breakers).....	7	(X)	172,598	(X)	168,205
36132 22	Parts for power circuit breakers, free-standing, oil and oilless, from 15.5 kV through 800 kV and above.....	4	(X)	¹ 118,100	(X)	¹ 118,791
36132 26	Power circuit breakers (sold separately) in individual enclosure and/or for use in low-voltage switchgear, 1,000 volts and below, excluding molded case circuit breakers (number of breakers) AND.....	5				
36132 27	Parts for power circuit breakers in individual enclosures and/or for use in low-voltage switchgear, 1,000 volts and below, excluding mold case circuit breakers AND.....	2				
36132 31	All other power circuit breakers (sold separately), oil and oilless, network protectors, and automatic circuit reclosers.....	10	(X)	170,261	(X)	151,709
36132 32	Parts for all other power circuit breakers, oil and oilless, network protectors, and automatic circuit reclosers.....	7	(X)	10,871	(X)	8,380
36133 —	Low voltage panelboards, distribution boards, and other switching and interruption devices, 1,000 volts and below....	117	(X)	1,612,596	(X)	1,642,569
	Panelboards, including enclosing cabinets:					
36133 11	Fusible, including combination switch fuse.....	45	1,287	115,561	1,298	139,574
36133 12	Circuit breaker.....	54	870	340,777	799	309,343
	Distribution switchboards:					
36133 15	Fusible.....	33	² 27,813	² 86,631	² 34,561	² 88,671
36133 17	Circuit breaker.....	40	² 60,033	² 215,533	² 63,979	² 242,072
36133 19	Other, including theater switchboards.....	8	² 26,073	² 15,214	² 25,766	² 16,298
	Switches (except switches commonly known as snap, toggle, and rotary switches and switch devices intended primarily to be used with electric motor controls):					
	Knife switches, enclosed:					
36133 21	Heavy duty.....	11	1,018	126,038	1,135	132,433
36133 22	General duty.....	11	1,058	36,151	1,081	37,366
	Load centers:					
36133 24	Enclosed fusible, service entrance, and branch circuit cutouts.....	5	372	3,185	387	3,503
36133 26	Circuit breaker type.....	15	6,680	189,563	7,061	193,371
36133 32	Grouped metering panels (combinations of two or more meters and related switching units with overcurrent protection associated with each meter, including accessory components; excluding single socket load combinations).....	19	295	31,387	¹ 328	¹ 31,541
36133 33	Other switches, excluding snap, toggle, push, etc., and including open knife switches, motor contact, motor disconnect, meter service equipment other than meter mounting, and test devices.....	22	(X)	124,377	(X)	¹ 120,065
36133 98	Other low voltage switchgear apparatus.....	29	(X)	328,179	(X)	¹ 328,312
36134 —	Fuses and fuse equipment, under 2,300 volts (except power distribution cutouts).....	19	(X)	412,778	(X)	409,398
36134 31	Nonrenewable plug fuses.....	5	(X)	16,000	(X)	18,957
36134 51	Nonrenewable cartridge fuses.....	10	(X)	275,225	(X)	268,207
36134 71	Renewable plug and cartridge fuses, including renewable links.....	6	(X)	4,815	(X)	5,513
36134 93	Other fuses and open fuse material, including cutouts, clips, bases, etc.....	15	(X)	116,738	(X)	116,721
36135 —	Molded case circuit breakers, 1,000 volts and under.....	37	82,633	963,258	77,275	916,579
	Industrial type, assembled as complete units in supporting and enclosing housing of insulating materials, with or without accessories or attachments.....	12	17,873	480,560	17,132	451,780

See footnotes at end of table.

Table 5. **SHIPMENTS OF SWITCHGEAR, SWITCHBOARD APPARATUS, RELAYS AND INDUSTRIAL CONTROLS: 1992 and 1991—Continued**

[Quantity in thousands of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36130 —	Switchgear and switchboard apparatus—Cont.					
36135 —	Molded case circuit breakers, 1,000 volts and under—Cont.					
	Industrial type assembled as complete units in supporting and enclosing housing of insulating materials, with or without accessories or attachments—Cont.					
36135 14	With ground fault detection capability AND	7				
36135 16	Without ground fault detection capability	14	17,873	480,560	17,132	451,780
	Residential or light duty type, primarily for load center application, assembled as complete units in supporting and enclosing housing of insulating materials	10	47,976	260,673	44,060	232,115
36135 18	With ground fault detection capability	10	702	20,726	676	19,383
36135 19	Without ground fault detection capability	10	47,274	239,947	43,384	212,732
36135 31	Individually enclosed industrial type, excluding panelboards and busway plug	17	7,588	20,490	7,296	21,284
	Other molded case circuit breakers:					
36135 91	Marine and Navy type	5	106	26,920	120	30,404
36135 92	Aircraft and aerospace	6	1,136	82,500	1,127	91,508
36135 93	Automotive AND	2				
36135 94	Electronic	5	1,003	57,176	985	52,003
36135 95	All other types	12	6,951	34,939	6,555	37,485
36136 —	Duct, including plug-in units and accessories, 1,000 volts and under, consisting of enclosed sectionalized prefabricated bus bars rate 20 amps "A" or more, associated structures and fittings	24	3,595	189,126	3,668	184,232
36136 11	Busways AND	22				
36136 31	Trolley-type and lighting distribution duct	4	3,595	189,126	3,668	184,232
36139 —	Switchgear (except ducts)	121	(X)	1,375,441	(X)	1,398,126
36139 07	Automatic and manual control panels (generators, transformers, feed-controls, etc.)	61	(X)	254,929	(X)	257,049
36139 09	Metal-clad switchgear (using power circuit breakers, oil and oilless, all voltages above 1,000 volts, up to and including 38 kV, excluding load interrupter switchgear	37	(X)	322,054	(X)	326,949
36139 10	Metal-enclosed load interrupter switchgear assemblies, all voltages, including parts	35	(X)	95,109	(X)	99,363
36139 13	Metal-enclosed low-voltage power circuit breaker switchgear assemblies, 1,000 volts and below, including parts and excluding load interrupter switchgear	30	(X)	146,350	(X)	155,075
36139 17	Metal-enclosed bus bars when sold separately, above 1,000 volts including isolated, segregated, nonsegregated, and cable bus bars	17	(X)	59,302	(X)	53,345
	Power switching equipment, 2,300 volts and over, including attachments, auxiliaries, bus supports and fittings, and accessories, but excluding power fuses sold separately. Also includes single-phase circuit reclosers:					
36139 41	Outdoor, excluding structures	26	(X)	172,634	(X)	179,372
36139 45	Indoor	9	(X)	2,871	(X)	2,965
36139 51	Power fuses and fuse links for 2,300 volts and over, ac service, excluding distribution cut-outs	11	(X)	110,685	(X)	109,987
36139 81	Power and ground connectors generally used in substation construction	4	(X)	(D)	(X)	(D)
36139 91	Overhead transmission and distribution connectors (clamps, taps, terminals, and splices)	6	(X)	40,165	(X)	41,200
36139 93	Transmission and distribution connectors, n.e.c., including underground deadends, hot line taps, stirrups, repair sleeves, etc.	6	(X)	(D)	(X)	(D)
36139 83	Distribution cutouts	10	(X)	96,019	(X)	94,886
36139 98	Other switchgear devices, including regulators and miscellaneous switchboard devices (sold separately)	22	(X)	88,948	(X)	93,028

See footnotes at end of table.

Table 5. SHIPMENTS OF SWITCHGEAR, SWITCHBOARD APPARATUS, RELAYS AND INDUSTRIAL CONTROLS: 1992 and 1991—Continued

[Quantity in thousands of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36250 —	Relays and industrial controls:					
36251 —	General-purpose and other relays	117	(X)	769,831	(X)	772,033
36251 01	Industrial-control relays (all voltages), n.e.c.	45	13,341	225,237	13,298	226,585
	General-purpose electromechanical relays:					
	Over 100 MW actuating power and sealed (either hermetically or environmentally):					
36251 03	0 through 2.0 amps contact rating	11	2,702	15,157	2,716	13,227
36251 04	Over 2.0 through 10.0 amps contact rating	15	684	25,112	698	27,292
36251 05	Over 10.0 amps contact rating	9	6,257	20,653	6,569	20,895
	Over 100 MW actuating power and not sealed:					
36251 06	0 through 2.0 amps contact rating AND	6				
36251 07	Over 2.0 through 10.0 amps contact rating	19	4,351	25,081	4,645	25,817
36251 08	Over 10.0 through 25.0 amps contact rating AND	12				
36251 09	Over 25.0 contact rating	6	7,365	24,202	6,938	24,122
36251 11	0 through 100 MW actuating power (both sealed and not sealed)	5	4,104	7,160	4,317	8,159
	Miniature printed circuit mounted electromechanical relays, excluding reed relays (profile height 1/2-inch max.):					
	Sealed (either hermetically or environmentally):					
36251 12	0 through 2.0 amps contact rating	6	860	3,716	2,719	3,938
36251 13	Over 2.0 through 5.0 amps contact rating AND	3				
36251 14	Over 5.0 amps contact rating	6	279	6,091	319	6,378
	Not sealed:					
36251 16	0 through 2.0 amps contact rating AND	5				
36251 17	Over 2.0 through 5.0 amps contact rating AND	3				
36251 18	Over 5.0 amps contact rating	4	8,408	10,717	8,058	10,125
	DIP or SIP footprint:					
36251 19	Sealed (either hermetically or environmentally)	5	2,728	4,631	3,547	5,639
36251 21	Not sealed	-	-	-	-	-
	Telephone relays, all types:					
36251 22	Sealed (either hermetically or environmentally)	7	503	1,797	522	1,641
36251 23	Not sealed	6	114	857	118	970
	General-purpose solid-state relays:					
	Pure solid-state, excluding time delay:					
36251 24	0 through 2.0 amps switch rating AND	6				
36251 25	Over 2.0 through 10.0 amps switch rating AND	8				
36251 26	Over 10.0 amps switch rating AND	3				
	Hybrid solid-state, excluding time delay:					
36251 28	Over 2.0 through 10.0 amps switch rating AND	2				
36251 29	Over 10.0 amps switch rating	3	2,775	19,426	2,705	19,300
	High performance military/aerospace/aircraft relays and contactors (generally pertaining to Mil-R5757, 6106, 19523, 25108, and 39016):					
36251 31	Round and square can multipole airframe relays and contactors (both sealed and not sealed)(all sizes)	6	514	46,448	566	57,539
	Crystal can types (sealed):					
36251 32	Larger than full size	5	446	24,112	435	23,197
36251 33	Full size	5	194	10,264	218	12,794
36251 35	Half size AND	5				
36251 38	Smaller than half size, including TO-5 package	4	2,310	32,212	2,323	33,051
36251 52	RF, antenna and coaxial relays (sealed and not sealed), excluding reed relays	4	(D)	(D)	(D)	(D)
	Reed relays:					
	Dry reed:					
36251 59	Miniature size (glass length less than .85 inch)	11	40,161	37,958	49,092	37,765
36251 61	Standard size	11	1,552	2,603	1,519	2,677
	Mercury wetted reed:					
36251 62	Miniature size (glass length less than .85 inch) AND	5				
36251 63	Standard size	6	7,460	19,907	7,560	23,046
36251 69	Stepping switches, stepping and impulse relays AND	6				
36251 75	Switchgear and protective relays	4	23	26,371	21	23,496

See footnotes at end of table.

Table 5. SHIPMENTS OF SWITCHGEAR, SWITCHBOARD APPARATUS, RELAYS AND INDUSTRIAL CONTROLS: 1992 and 1991—Continued

[Quantity in thousands of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36250 —	Relays and industrial controls—Cont.					
36251 —	General-purpose and other relays—Cont.					
	Timing relays (timers):					
36251 79	Solid-state/EMR combination	22	928	34,114	'997	'39,414
36251 81	Solid-state-pure	11	237	4,190	291	4,823
36251 82	All other timing relays (timers), including pneumatic, motor driven electronic, etc.	18	(X)	29,643	(X)	32,173
36251 92	All other general-purpose and special-purpose relays, n.e.c. .	16	(X)	108,711	(X)	82,941
36251 96	Parts for general-purpose and special-purpose relays (sold separately)	6	(X)	(D)	(X)	(D)
36252 —	Specific-purpose industrial controls	196	(X)	2,098,383	(X)	1,992,689
36252 45	U.S. Coast Guard, Navy, and Marine auxiliary controls and accessories AND	21				
36252 47	Metal mill controls and accessories (all voltages)	8	93	216,592	130	228,653
36252 48	Crane and hoist controls, constant and adjustable voltage, including operators' desks and stations	18	38	49,826	'37	47,201
36252 49	Definite-purpose contactors and starters (600 volts and less)	16	5,029	73,628	'4,657	'68,240
	Motion controllers:					
	Stand-alone motion controls:					
36252 51	Computer numerical controls (CNC); positioning (point-to-point)	10	² 53,628	34,342	² 49,695	32,748
36252 55	Computer numerical controls (CNC); continuous path (contouring)	9	² 20,387	92,889	² 21,161	'108,079
	Other stand-alone motion controls:					
36252 61	Servo type AND	5				
36252 63	Stepper type AND	1				
	Subordinate motion controls:					
36252 64	Programmable controller motion modules AND	8				
36252 66	Bus motion modules AND	1				
36252 68	Chip level motion control devices AND	1				
36252 69	Other subordinate motion control devices	2	(X)	30,411	(X)	32,996
36252 71	Programmable controllers (sold separately)	53	583	862,601	632	'842,380
36252 76	Other specific- or special-purpose ac and dc controllers, other definite-purpose devices	121	(X)	738,094	(X)	'632,392
36253 —	General-purpose industrial controls	255	(X)	2,782,997	(X)	2,878,570
	ac full voltage non-combination magnetic starters (1,000 volts or less):					
36253 02	Designed and rated to U. S. National Standards (NEMA) AND	21				
36253 04	Designed and rated to International Standards (IEC)	10	9,489	154,806	9,127	'149,999
	ac full voltage combination magnetic starters (1,000 volts or less):					
	Combination starters (less pumping panels):					
36253 08	Designed and rated to U. S. National Standards (NEMA) AND	16				
36253 09	Designed and rated to International Standards (IEC)	7	139	46,883	'190	'67,620
	Pumping panels:					
36253 11	Designed and rated to U. S. National Standards (NEMA) AND	17				
36253 12	Designed and rated to International Standards (IEC)	8	² 37,969	19,906	² '40,873	'20,566
36253 06	Disconnect switches (600 volts and less)	15	683	26,876	667	26,252
	ac full voltage manual controllers, 1,000 volts or less:					
36253 23	Designed and rated to U. S. National Standards (NEMA) ..	11	336	27,728	'401	'28,194
36253 25	Designed and rated to International Standards (IEC)	4	75	1,726	'73	'1,758
	ac contactor, 1,000 volts or less, excluding controls for packaged adjustable speed drives and synchronous motor control:					
36253 27	Designed and rated to U. S. National Standards (NEMA) ..	13	785	38,230	'766	'41,937
36253 29	Designed and rated to International Standards (IEC)	10	851	33,390	'779	'31,084
36253 14	ac reduced voltage controls, 1,000 volts or less, excluding synchronous motor starters	26	'29,642	26,408	'28,970	27,386
36253 15	Synchronous motor starters, 1,000 volts or less, including both full and reduced voltage	8	(X)	(³)	(X)	(³)
36253 16	Motor control centers, 1,000 volts or less	43	(X)	318,194	(X)	351,562

See footnotes at end of table.

Table 5. SHIPMENTS OF SWITCHGEAR, SWITCHBOARD APPARATUS, RELAYS AND INDUSTRIAL CONTROLS: 1992 and 1991—Continued

[Quantity in thousands of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36250 —	Relays and industrial controls—Cont.					
36253 —	General-purpose industrial controls—Cont.					
	Motion controllers:					
36253 18	Starters and contactors for squirrel cage and wound rotor and synchronous and nonsynchronous motors, over 1,000 to 7,200 volts; air break, vacuum, and oil immersed	15	² 30,707	64,163	¹ 31,848	67,704
36253 21	Brakes and clutches	16	974	61,972	998	62,081
36253 34	Digital readout system, including dial or plugboard type	17	18,853	11,494	19,547	13,702
	Presence sensors and motion measurement devices:					
	Limit switches (positioning sensors):					
36253 32	Electromechanical positioning sensors	30	(X)	122,145	(X)	¹ 117,247
36253 33	Movement sensors	14	(X)	20,819	(X)	¹ 17,570
	Solid-state positioning sensors:					
36253 35	Non-optical proximity sensors	15	(X)	45,760	(X)	¹ 43,845
36253 36	Optical proximity sensors	13	(X)	60,022	(X)	54,554
36253 37	All other pilot circuit devices, excluding relays and limit switches	13	(X)	20,312	(X)	¹ 20,299
36253 38	dc power circuit devices (all voltages)	12	(X)	13,749	(X)	15,430
36253 39	Other control sensors (all voltages)	17	(X)	83,285	(X)	¹ 86,659
	Pushbuttons and pushbutton stations, excluding operators' desk and stations:					
36253 41	Pushbuttons, explosion proof - Classes 1, 11, and 111 - Division 1	5	(X)	(3)	(X)	(3)
	Non-explosion proof:					
36253 42	Pushbuttons, 18 mm and smaller	12	(X)	5,096	(X)	5,127
36253 46	Pushbuttons, 19 mm to 29 mm	20	(X)	35,221	(X)	¹ 35,131
36253 48	Pushbuttons, 30 mm and larger	22	(X)	200,158	(X)	198,336
36253 81	Rheostats and resistors (except for electronic applications) sold separately, n.e.c.	15	(X)	36,207	(X)	36,975
	Controls for adjustable speed drives, including electronic and nonelectric and operators' desks and stations:					
36253 83	Controls for ac packaged drives	31	² 103,302	209,197	² 98,439	209,312
36253 84	Controls for dc packaged drives	28	375	88,265	¹ 461	¹ 96,505
36253 85	ac drives systems	20	² 41,620	118,409	² 37,362	¹ 118,074
36253 86	dc drives systems	19	343	149,369	291	166,713
	Motion/position drive amplifiers:					
36253 73	ac (ECM) drive amplifiers AND	2				
36253 75	dc drive amplifiers AND	2				
36253 77	Stepper drive amplifiers AND	1				
36253 93	Solid-state contactors (all voltages) AND	7				
36253 98	Solid-state controllers (all voltages)	51	5,825	148,736	5,778	¹ 145,757
36253 99	All other general industry devices and systems	88	(X)	⁴ 594,471	(X)	⁴ 621,191
36254 —	Motor controller accessories and parts for industrial controls ..	122	(X)	442,761	(X)	434,123
36254 91	Motor controller accessories, including those items which are sold separately, but become part of a motor controller. Includes overload relays, auxiliary contacts, heater elements, mechanical interlocks, control transformers, kits to add pushbuttons, selector switches, pilot lights, separate controller enclosures and enclosure fittings, reset mechanisms, etc., excluding motor circuit switches sold separately	30	(X)	115,569	(X)	¹ 111,274
36254 97	Parts for industrial controls	106	(X)	327,192	(X)	322,849

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. n.e.c. Not elsewhere classified. ¹Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹Data for "Parts for power circuit breakers for use in metal-clad switchgear" (product code 36132 17) are combined with "Parts for power circuit breakers, free-standing, oil and oilless, from 15.5 kV through 800 kV and above" (product code 36132 22) to avoid disclosing figures for individual companies.

²Quantity in number of units.

³Data for "Synchronous motor starters, 1,000 volts or less, including both full and reduced voltage" (product code 36253 15) are combined with "All other general industry devices and systems" (product code 36253 99) to avoid disclosing figures for individual companies.

⁴Data for "Pushbuttons, explosion proof" are included with "All other general industry devices and systems" (product code 36253 99).

Table 6. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SWITCHGEAR, SWITCHBOARD APPARATUS, RELAYS, AND INDUSTRIAL CONTROLS: 1992 AND 1991**

[Value in thousands of dollars]

Product code	Product description	Manufacturer's shipments (value f.o.b. plant)	Exports of domestic merchandise (value at port) ¹	Imports for consumption ²
1992				
36132 16, 21, 26, 31	Power circuit breakers	(³)	115,162	110,806
36132 17, 22, 27, 32	Parts for power circuit breakers ³	393,216	97,914	29,539
36133 11, 12, 15, 17, 19	Low voltage panelboards and distribution boards	787,153	68,651	60,419
36133 21, 22	Knife switches	162,189	3,263	436
36134 31, 51, 71, 93	Fuses and fuse equipment, under 2,300 volts	412,778	79,697	50,392
36135 00	Molded case circuit breakers, 1,000 volts and under	963,258	74,060	133,230
36136 11, 31	Duct, including plug-in units and accessories	189,126	20,378	(NA)
36139 07, 09, 10, 13, 17, 41, 45, 83, 98	Switchgear and switchgear assemblies	1,238,216	119,178	83,363
36139 51	Power fuses and fuse links, 2,300 volts and over	110,685	12,424	997
36139 81, 91, 93	Power and ground connectors; and transmission and distribution connectors	115,488	139,490	111,509
36251 01, 03-09 11-14, 16-19, 21-29 31-33, 35, 38, 59, 61-63, 69, 75, 79, 81-82, 92	Relays	766,370	263,229	490,310
36252 51, 55	Controls for numerically controlled machine tools	127,231	19,714	36,001
36252 71	Programmable controllers	862,601	100,042	88,171
36253 01, 03, 05, 15	Motor starters	(NA)	21,777	14,986
36253 16	Motor control centers, 1,000 volts or less	318,194	52,203	18,965
36253 21	Brakes and clutches	61,972	21,284	24,612
36253 32, 33	Limit switches	142,964	7,625	15,553
36253 81	Rheostats and resistors	36,207	3,318	2,500
1991				
36132 16, 21, 26, 31	Power circuit breakers ³	(³)	104,279	101,402
36132 17, 22, 27, 32 32,	Parts for power circuit breakers	368,486	83,620	22,061
36133 11, 12, 15, 17, 19	Low voltage panelboards and distribution boards	796,128	33,933	67,161
36133 21, 22	Knife switches	169,799	3,063	738
36134 31, 51, 71 93, 93	Fuses and fuse equipment, under 2,300 volts	409,398	79,796	47,862
36135 00	Molded case circuit breakers, 1,000 volts and under	916,579	60,394	105,146
36136 11, 31	Duct, including plug-in units and accessories	184,232	26,734	641
36139 07, 09, 10, 13, 17, 41, 45, 83, 98	Switchgear and switchgear assemblies	1,262,032	41,774	24,048
36139 51	Power fuses and fuse links, 2,300 volts and over	109,987	12,662	258
36139 81, 91, 93	Power and ground connectors; and transmission and distribution connectors	119,135	164,352	117,976
36251 01, 03, 09 11-14, 16-19, 21-29 31-33, 35, 38, 59, 61-63, 69, 75, 79, 81-82, 92	Relays	767,004	235,460	409,863
36252 51, 55	Controls for numerically controlled machine tools	140,827	21,605	36,459
36252 71	Programmable controllers	842,380	78,826	89,642
36253 01, 03, 05, 15	Motor starters	(NA)	17,347	16,187
36253 16	Motor control centers, 1,000 volts or less	351,562	50,024	11,880
36253 21	Brakes and clutches	62,081	24,534	38,114
36253 32, 33	Limit switches	134,817	10,173	12,326
36253 81	Rheostats and resistors	36,975	3,814	2,538

(NA) Not available.

¹Source: Bureau of Census report EM 545, *U.S. Exports*.²Source: Bureau of Census report IM 145, *U.S. Imports for Consumption*.³"Manufacturer's shipments" data for "Power circuit breakers" and "Parts for power circuit breakers" are combined.

HISTORICAL NOTE

Data on switchgear, switchboard apparatus, relays, and industrial controls have been collected by the Bureau of the Census since 1971. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Robert Wright, 301-763-5573.

7.3 ELECTRIC LAMPS

INTRODUCTION

These data cover all known manufacturers of electric lamps (bulbs only) in the United States, approximately 32 companies. The statistics were collected by mail on Bureau of the Census quarterly Form MQ36B, Electric Lamps (Bulbs Only).

SUMMARY OF FINDINGS

In 1992, production of electric lamps totaled 3,421 million units, an increase of 6 percent over the 1991 total of 3,226 million units. Shipments of electric lamps in 1992 amounted to 3,422 million, valued at \$2,854 million, representing an increase of 4 percent in the number and an increase of 5 percent in the value shipped relative to the previous year.

EXPLANATION OF TERMS

Production. Represents total number of lamps produced including for sale to other lamp manufacturers after adjustments for breakage, shrinkage, obsolescence, and any other inventory adjustment.

Exports. Includes all types of lamps shipped to foreign countries, or to agents or exporters for reshipment to foreign countries.

Stocks on Hand, End of Month. Includes all types of lamps on hand at the end of the month.

Photoflash Lamps.

AG (All Glass). All glass types with glass groove base: AG-1, AG-1B, etc.

M-Types. Types with miniature pinless base: M-2, M-2B, M-3, etc.

Flash Cubes. Types wherein several subminiature type flash lamps with reflectors are enclosed in one plastic cube, bar, etc. Each cube counts as four flashes, each flash bar as ten flashes, etc.

Other Flash Lamps. Other flash lamps using the bayonet base (5, 5B, P-25, etc.) and the medium screw base (11, 11B, P40, etc.).

General Lighting Large Incandescent Lamps. Represent all large incandescent lamps for general lighting purposes, 15 watts and above, 100 to 130 volts, including

tinted lamps such as pink, yellow, and white. White lamps are those with a special inside white coating which provide a softer, more diffused, and whiter light.

Three-Way Lamps. Includes medium and mogul base lamps, 100 to 130 volts, including tinted lamps, such as pink and white.

Reflector and Par Lamps. Includes all incandescent filament lighting lamps, 100 to 130 volts, using a pressed or blown bulb reflectorized from the maximum diameter to the neck of the bulb. These exclude special-purpose lamps, such as heat lamps, sun lamps, reflectorized photo lamps, and automotive types.

Infrared Lamps. Represents all types, including incandescent and tungsten halogen quartz, regardless of voltage.

Tungsten Halogen (Quartz Iodine). Represents all large incandescent lamps, (except infrared) which utilize the tungsten halogen regenerative cycle. Excludes the 650-watt lamp used in sunguns, which are included with photoflood, photo-enlarger, and other photolamps.

Decorative Under 150 Watts, 100 to 130 Volts. Represents flame, candelabra, chimney, or other special bulb shapes (except Christmas tree lamp types) intended for applications in which the aesthetic appearance of the lighted lamp is more important than light output or other design characteristics.

All Other Large Incandescent (Special-Purpose) Lamps. Includes all large incandescent lamps for special services such as sign and display (including colored lamps, except tinted), aviation, street, railway, spot, and floodlighting, train and country home lighting, showcases, other items for special applications, and large incandescent lamps, including those under 15 watts and other than 100 to 130 volts.

All Other Miniature Incandescent Lamps. Includes all lamps operating from small voltages and primarily used in special services (other than those covered in fluorescent hot cathode-high output), such as: toy, pin game, telephone switchboard, surgical, medical, and dental equipment, and other items for special applications.

Fluorescent (Hot Cathode) Lamps. Includes all types of fluorescent (hot cathode) lamps. High output includes high output, power grove, VHO, and SHO.

General Lighting High Intensity Discharge Lamps. Includes mercury, self-ballasted mercury, metal halide, and high pressure sodium lamps, in one of the following forms: (1) in clear or diffusing bulbs, (2) with or without light control (i.e., A, B, BT, E, R, or T bulbs), (3) intended for general lighting, (4) store and commercial lighting, or (5) roadway and area lighting, or (6) flood and sports lighting applications.

Miscellaneous Electric Discharge Lamps. Includes short arc xenon, short arc mercury, short arc mercury-xenon, long arc xenon, photo-chemical, low pressure sodium, and other special-purpose discharge lamps not specifically cited elsewhere.

Christmas Tree Lamps. Includes both incandescent type and fluorescent or electrical discharge type Christmas tree lamps.

Table 7. **VALUE OF DOMESTIC SHIPMENTS OF SELECTED ELECTRIC LAMPS: 1992 AND 1991**

[Thousands of dollars]

Period	Total	Large incandescent (except photo)	General lighting high intensity	Fluorescent hot cathode
1992				
Total.....	2,103,201	980,785	238,285	884,131
Fourth quarter	607,033	290,428	70,579	246,026
December.....	216,184	102,320	23,566	90,298
November.....	207,412	102,825	24,265	80,322
October.....	183,437	85,283	22,748	75,406
Third quarter.....	499,948	235,552	53,720	210,676
September.....	197,035	95,606	20,844	80,585
August.....	160,634	75,883	16,927	67,824
July.....	142,279	64,063	15,949	62,267
Second quarter.....	489,668	220,522	56,587	212,559
June.....	163,640	69,144	19,716	74,780
May.....	156,728	72,235	17,442	67,051
April.....	169,300	79,143	19,429	70,728
First quarter.....	506,552	234,283	57,399	214,870
March.....	187,912	84,842	20,557	82,513
February.....	169,924	77,241	19,900	72,783
January.....	148,716	72,200	16,942	59,574
1991				
Total.....	2,008,387	964,791	216,045	827,551
Fourth quarter	594,343	300,477	64,367	229,499
December.....	184,846	88,121	22,152	74,573
November.....	211,075	110,540	22,093	78,442
October.....	198,422	101,816	20,122	76,484
Third quarter.....	470,790	218,466	49,456	202,868
September.....	183,151	90,562	19,100	73,489
August.....	152,483	69,858	16,351	66,274
July.....	135,156	58,046	14,005	63,105
Second quarter.....	461,113	206,167	52,571	202,375
June.....	151,423	68,364	13,682	69,377
May.....	147,821	64,487	18,889	64,445
April.....	161,869	73,316	20,000	68,553
First quarter.....	482,141	239,681	49,651	192,809
March.....	168,878	77,473	18,509	72,896
February.....	165,203	84,990	16,352	63,861
January.....	148,060	77,218	14,790	56,052

Note: The monthly figures are based on data filed on Bureau of the Census monthly Form M36D, *Electric Lamps (Bulbs Only)*, from major producers of these types of lamps.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF ELECTRIC LAMPS, BY QUARTER: 1992 and 1991

[Quantity in thousands of lamps; value in thousands of dollars]

Product code	Product description	Number of companies ¹	Production	Shipments (except shipments from other lamp manufacturers)						Stocks, end of year (quantity) ²
				Total		Domestic		Export		
				Quantity	Value	Quantity	Value	Quantity	Value	
	1992									
	TOTAL									
	All types ²	32	3,421,251	3,422,083	2,854,289	3,196,787	2,605,824	225,296	248,465	558,987
	Photographic incandescent.	4	55,973	57,422	51,906	45,210	42,410	12,212	9,496	13,395
36411 23	Photoflash, including blue	3	49,928	50,847	7,180	39,944	5,556	10,903	1,624	12,048
36411 27	Projection	3	5,059	5,527	42,012	4,398	34,678	1,129	7,334	1,028
36411 25	Photoflood, photoenlarger, and other photolamps	2	986	1,048	2,714	868	2,176	180	538	319
	Large incandescent, except photographic and Christmas tree	13	1,798,946	1,820,200	1,047,289	1,761,302	980,785	58,898	66,504	312,607
	General lighting:									
	15 to 150 watts, 100 to 130 volts, white lamps	7	780,800	795,542	249,904	787,563	248,139	7,979	1,765	107,320
36411 09	15 to 150 watts, 100 to 130 volts, all other	8	600,501	595,930	202,403	575,897	197,014	20,033	5,389	95,640
36411 12	Above 150 watts, 100 to 130 volts	7	9,502	11,394	14,086	10,624	13,357	770	729	5,869
36411 13	Three-way, 100 to 130 volts	4	59,420	58,333	56,918	56,342	55,928	1,991	990	13,561
	Reflector, 100 to 130 volts:									
	Par type (pressed glass)	7	51,930	52,970	165,202	45,109	143,369	7,861	21,833	9,614
36411 19	R type (blown glass)	7	59,326	58,680	122,659	55,118	118,182	3,562	4,477	12,715
36411 15	Infrared (all types)	6	5,391	4,730	16,945	4,423	15,903	307	1,042	1,007
36411 16	Traffic and street lighting, 100 to 130 volts	7	5,688	5,428	5,449	4,617	4,662	811	787	2,732
36411 17	Rough and vibration service, 100 to 130 volts	7	24,351	25,646	21,734	25,084	21,266	562	468	6,093
	Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun:									
	General lighting	6	7,423	6,323	32,197	5,945	29,551	378	2,646	2,435
	Other	4	11,986	10,134	48,794	5,126	29,915	5,008	18,879	2,350
36411 03	Low voltage display lamps (12V or less)	4	10,322	8,594	27,035	3,921	13,373	4,673	13,662	1,842
36411 04	All other	3	1,664	1,540	21,759	1,205	16,542	335	5,217	508
36411 07	Decorative under 150 watts, 100 to 130 volts, except A line	4	78,859	83,756	41,084	81,440	39,645	2,316	1,439	22,823
36411 18	All other large incandescent (special purpose), including under 15 watt and other than 100 to 130 volts ³	4	103,769	111,334	69,914	104,014	63,854	7,320	6,060	30,448
	Miniature incandescent	8	941,558	943,730	484,688	833,729	430,253	110,001	54,435	135,593
	Automobile glass and metal sealed beams:									
	OEM	3	33,474	34,227	74,551	30,253	65,707	3,974	8,844	1,939
36411 62	Replacement	4	58,561	58,790	220,895	50,297	201,359	8,493	19,536	6,631
	All other glass and metal sealed beams:									
	OEM	3	5,207	5,492	16,628	5,146	15,733	346	895	376
36411 67	Replacement	4	4,653	5,922	28,309	2,753	15,796	3,169	12,513	1,763
	Automobile miniature other than glass and metal sealed beams:									
	OEM	4	461,798	460,108	62,360	439,061	58,930	21,047	3,430	31,361
36411 36	Replacement	4	188,673	187,383	42,320	149,476	37,544	37,907	4,776	60,456
	Flashlight:									
	OEM	3	4,787	4,767	921	4,767	921	-	-	1,640
36411 71	Replacement	3	2,596	3,353	1,066	2,986	1,005	367	61	2,264
	Radio panel:									
	OEM	4	14,592	14,594	1,981	14,211	1,938	383	43	603
36411 74	Replacement	4	5,371	5,786	967	5,157	887	629	80	1,251
	Subminiature lamps (T-2 and below):									
	OEM	7	80,096	81,408	7,750	67,920	7,068	13,488	682	10,670
36411 78	Replacement	4	25,163	24,369	3,704	6,376	2,301	17,993	1,403	6,231
	All other miniature incandescent, including surgical, medical, and dental instruments ⁴ :									
	OEM	6	46,132	45,405	11,815	45,279	11,651	126	164	3,002
36411 78	Replacement	4	10,455	12,126	11,421	10,047	9,413	2,079	2,008	7,406
	Electric discharge, except Christmas tree	19	624,774	600,731	1,270,406	556,548	1,152,376	44,185	118,030	97,392
	Germicidal, bacterial, and ozone	6	697	732	11,581	542	8,606	190	2,975	129
36411 42	Sunlamp bulbs	5	431	409	3,443	394	3,298	15	145	96
	Fluorescent, hot cathode	9	555,183	536,141	964,307	495,732	884,131	40,409	80,176	85,374
	Slimline, single pin base, including rapid start	5	62,985	60,351	156,933	55,244	147,017	5,107	9,916	8,279
36411 46	Circular, including rapid start	2	7,815	7,903	18,724	5,177	12,752	2,726	5,972	1,602
36411 47	High output 800 milliamp and over, including power grove, VHO, and SHO	6	31,968	30,180	125,982	28,353	119,001	1,827	6,981	5,526
	Other fluorescent hot cathode	9	452,415	437,707	662,668	406,958	605,361	30,749	57,307	69,967
	30 watts and below	9	79,214	70,314	213,837	58,052	182,297	12,262	31,540	19,163
36411 48	Compact fluorescent lamps	5	35,197	30,371	120,616	23,987	104,545	6,384	16,071	10,831
36411 49	All other	7	44,017	39,943	93,221	34,065	77,752	5,878	15,469	8,332
	Over 30 watts	6	373,201	367,393	448,831	348,906	423,064	18,487	25,767	50,804
36411 81	U-shaped T8 and T12	2	12,395	12,875	53,866	11,889	50,192	986	3,674	2,067
36411 82	Linear T8 rapid start	3	28,657	27,688	56,306	27,066	54,349	622	1,957	3,256
36411 83	All other above 30 watts	5	332,149	326,830	338,659	309,951	318,523	16,879	20,136	45,481
	Miscellaneous electrical discharge	12	68,463	63,449	291,075	59,878	256,341	3,571	34,734	11,793
	Glow	3	45,279	40,043	6,227	39,745	5,337	298	890	8,206
36411 51	General lighting high intensity lamps	6	22,480	22,721	271,322	19,497	238,285	3,224	33,037	3,530
36411 54	Sodium vapor	3	10,881	10,934	125,851	9,076	109,279	1,858	16,572	1,632
36411 56	Standard mercury vapor	5	5,650	5,416	42,385	4,689	37,273	727	5,112	1,177
36411 57	Metal halide	4	5,949	6,371	103,086	5,732	91,733	639	11,353	721
36411 53	Sodium, photochemical, cold cathode fluorescent, and other miscellaneous electrical discharge	7	704	685	13,526	636	12,719	49	807	57
36411 55	Christmas tree lamps, all types ²	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF ELECTRIC LAMPS, BY QUARTER: 1992 and 1991—Continued

[Quantity in thousands of lamps; value in thousands of dollars]

Product code	Product description	Number of com- panies ¹	Production	Shipments (except shipments from other lamp manufacturers)						Stocks, end of year (quantity)
				Total		Domestic		Export		
				Quantity	Value	Quantity	Value	Quantity	Value	
	1992									
	FIRST QUARTER									
	All types ²	32	878,168	819,351	688,720	760,880	636,437	58,471	52,283	638,970
	Photographic incandescent	4	13,852	15,403	12,053	8,731	9,759	8,672	2,294	13,162
36411 23	Photoflash, including blue	3	12,375	13,890	1,808	7,491	979	8,399	829	11,452
36411 27	Projection	3	1,212	1,268	9,818	1,043	8,268	225	1,348	1,329
36411 25	Photoflood, photoenlarger, and other photolamps	2	285	245	629	197	512	48	117	401
	Large incandescent, except photographic and Christmas tree	13	472,157	428,830	248,138	414,160	234,283	14,650	13,853	382,442
	General lighting:									
	15 to 150 watts, 100 to 130 volts, white lamps	7	205,048	188,723	81,158	185,011	60,720	1,712	436	142,007
36411 09	15 to 150 watts, 100 to 130 volts, all other	8	157,591	148,184	50,493	140,589	49,033	5,575	1,460	102,450
36411 12	Above 150 watts, 100 to 130 volts	7	1,845	2,410	2,815	2,177	2,610	233	205	8,838
36411 13	Three-way, 100 to 130 volts	4	14,926	14,918	18,586	13,877	18,128	1,041	458	12,405
	Reflector, 100 to 130 volts:									
	Per type (pressed glass)	7	12,397	12,048	37,212	9,963	31,923	2,083	5,289	11,302
36411 19	R type (blown glass)	7	15,897	13,823	27,638	13,028	26,735	795	903	15,836
36411 15	Infrared (all types)	8	1,508	1,113	4,319	1,029	4,079	84	240	1,054
36411 16	Traffic and street lighting, 100 to 130 volts	7	1,277	1,271	1,206	1,089	1,033	182	173	2,506
36411 17	Rough and vibration service, 100 to 130 volts	7	5,292	6,830	5,675	6,485	5,560	145	115	6,388
	Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun:									
	General lighting	6	1,889	1,637	8,890	1,564	8,268	73	622	2,489
	Other	4	4,285	1,771	8,843	1,123	6,361	648	2,482	3,155
36411 03	Low voltage display lamps (12V or less)	4	3,409	1,489	4,718	874	3,048	615	1,670	2,109
36411 04	All other	3	876	282	4,125	249	3,313	33	812	1,046
36411 07	Decorative under 150 watts, 100 to 130 volts, except A line	4	20,746	18,945	9,350	18,510	9,048	435	302	29,989
36411 18	All other large incandescent (special purpose), including under 15 watt and other than 100 to 130 volts ³	4	29,456	21,379	13,953	19,735	12,785	1,644	1,168	46,023
	Miniature incandescent	8	227,466	236,568	125,005	207,874	112,425	28,694	12,580	135,815
	Automobile glass end metal sealed beams:									
	OEM	3	7,730	8,600	18,709	7,485	16,296	1,115	2,413	1,822
36411 62	Replacement	4	15,617	15,790	61,156	13,666	56,375	2,124	4,781	7,384
	All other glass and metal sealed beams:									
	OEM	3	1,264	1,363	4,041	1,266	3,792	97	249	376
36411 67	Replacement	4	1,272	1,180	5,618	651	3,591	529	2,027	3,200
	Automobile miniature other than glass end metal sealed beams:									
	OEM	4	115,155	114,059	15,437	107,483	14,357	6,576	1,080	32,224
36411 36	Replacement	4	39,259	48,019	10,418	38,639	9,401	9,380	1,017	54,410
	Flashlight:									
	OEM	3	1,704	1,677	313	1,677	313	-	-	1,647
36411 72	Replacement	3	425	688	221	660	216	28	5	2,758
	Radio panel:									
	OEM	4	2,915	3,219	451	3,119	440	100	11	300
36411 74	Replacement	4	1,427	1,400	246	1,164	217	236	29	1,781
	Subminiature lamps (T-2 and below):									
	OEM	7	20,077	19,199	1,917	16,239	1,775	2,960	142	12,859
36411 76	Replacement	4	6,126	6,309	972	1,713	614	4,596	358	5,261
	All other miniature incandescent, including surgical, medical, and dental instruments ⁴ :									
	OEM	6	11,832	11,582	2,871	11,556	2,834	26	37	3,293
36411 78	Replacement	4	2,663	3,483	2,635	2,556	2,204	927	431	8,500
	Electric discharge, except Christmas tree	19	162,693	138,550	303,526	130,095	279,970	8,455	23,556	107,531
	Germicidal, bactericidal, and ozone	5	145	209	2,778	166	2,068	43	710	100
36411 42	Sunlamp bulbs	5	143	150	1,163	145	1,119	5	44	67
	Fluorescent, hot cathode	9	143,796	121,524	231,121	113,878	214,870	7,646	16,251	98,484
36411 43	Slimline, single pin base, including rapid start	5	16,920	14,471	38,508	13,301	36,441	1,170	2,067	9,829
36411 46	Circular, including rapid start	2	1,892	1,958	4,059	1,484	3,055	474	1,004	1,786
36411 47	High output 800 milliwatt and over, including power groove, VHO, and SHO	6	7,665	5,485	30,743	5,079	29,129	406	1,614	6,294
	Other fluorescent hot cathode	9	117,319	99,610	157,811	94,014	146,245	5,596	11,566	80,575
	30 watts and below	9	19,663	13,938	51,726	11,820	45,730	2,118	5,996	19,318
36411 48	Compact fluorescent lamps	5	6,677	6,476	27,954	5,932	26,759	546	1,195	10,031
36411 49	All other	7	10,986	7,460	23,772	5,888	18,971	1,572	4,801	9,287
	Over 30 watts	5	97,656	85,672	106,085	82,194	100,515	3,478	5,570	61,257
36411 81	U-shaped T8 and T12	2	2,906	2,972	12,481	2,809	11,846	163	635	2,597
36411 82	Linear T8 rapid start	2	7,354	5,590	11,455	5,495	11,006	95	449	4,813
36411 83	All other above 30 watts	5	87,396	77,110	82,149	73,890	77,663	3,220	4,486	53,647
	Miscellaneous electrical discharge	12	18,609	16,667	68,464	15,906	61,913	761	6,551	6,660
36411 51	Glow	3	12,875	10,959	1,865	10,875	1,540	84	325	4,886
36411 52	General lighting high intensity lamps	6	5,559	5,536	63,424	4,869	57,399	667	6,025	3,953
36411 54	Sodium vapor	3	2,693	2,662	29,501	2,271	26,515	391	2,986	1,817
36411 56	Standard mercury vapor	5	1,473	1,413	10,740	1,276	9,775	137	965	1,237
36411 57	Metal halide	4	1,393	1,461	23,183	1,322	21,109	139	2,074	889
36411 53	Sodium, photochemical, cold cathode fluorescent, and other miscellaneous electrical discharge	7	175	172	3,175	162	2,974	10	201	41
36411 55	Christmas tree lamps, all types ²	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF ELECTRIC LAMPS, BY QUARTER: 1992 and 1991—Continued

[Quantity in thousands of lamps; value in thousands of dollars]

Product code	Product description	Number of companies ¹	Production	Shipments (except shipments from other lamp manufacturers)						Stocks, end of year (quantity)
				Total		Domestic		Export		
				Quantity	Value	Quantity	Value	Quantity	Value	
	1992									
	SECOND QUARTER									
	All types ²	32	896,430	798,874	664,093	748,883	601,488	49,991	62,605	711,595
	Photographic incandescent.	4	22,292	12,311	12,892	10,693	10,625	1,618	2,267	23,274
36411 23	Photoflash, including blue	3	20,689	10,552	1,105	9,269	887	1,283	218	21,589
36411 27	Projection	3	1,359	1,474	11,009	1,181	9,104	293	1,905	1,325
36411 25	Photoflood, photoenlarger, end other photolamps	2	244	285	778	243	634	42	144	360
	Large incandescent, except photographic end Christmas tree	13	468,710	399,331	237,532	385,038	220,522	14,293	17,010	443,970
	General lighting:									
36411 08	15 to 150 watts, 100 to 130 volts, white lamps	7	205,859	161,250	52,081	160,730	51,924	520	157	184,996
36411 09	15 to 150 watts, 100 to 130 volts, ell other	6	156,755	143,444	49,498	137,952	48,001	5,492	1,497	115,807
36411 12	Above 150 watts, 100 to 30 volts	7	2,607	2,147	2,714	1,922	2,477	225	237	7,656
36411 13	Three-way, 100 to 130 volts	4	16,398	12,632	11,964	12,377	11,739	455	225	16,048
	Reflector, 100 to 130 volts:									
36411 14	Par type (pressed glass)	7	13,930	11,679	37,055	10,199	32,839	1,480	4,216	13,256
36411 19	R type (blown glass)	7	14,833	13,433	28,829	12,554	27,613	879	1,216	15,543
36411 15	Infrared (all types)	6	1,157	772	3,244	689	2,950	83	294	1,126
36411 16	Traffic and street lighting, 100 to 130 volts	7	1,564	1,438	1,493	1,130	1,195	308	298	2,607
36411 17	Rough and vibration service, 100 to 130 volts.	7	7,060	6,212	5,250	6,065	5,120	147	130	6,898
	Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun:									
36411 05	General lighting	6	1,850	1,354	7,071	1,227	6,157	127	914	2,083
	Other	4	2,812	2,668	12,938	1,239	7,426	1,429	5,512	3,156
36411 03	Low voltage display lamps (12V or less)	4	2,564	2,285	6,808	956	3,404	1,329	3,404	2,313
36411 04	All other	3	248	383	6,130	283	4,022	100	2,108	843
36411 07	Decorative under 150 watts, 100 to 130 volts, except A line.	4	18,222	16,539	8,609	15,756	8,152	783	457	31,204
36411 18	All other large incandescent (special purpose), including under 15 watt and other than 100 to 130 volts ³	4	25,663	25,563	16,786	23,198	14,929	2,365	1,857	46,590
	Miniature incandescent	8	241,303	238,577	106,156	215,986	93,888	22,591	12,268	131,380
	Automobile glass and metal sealed beams:									
36411 61	OEM	3	9,700	9,254	20,049	8,523	18,202	731	1,847	2,268
36411 62	Replacement	4	13,455	10,880	38,277	8,848	33,862	2,032	4,415	9,262
	All other glass and metal sealed beams:									
36411 65	OEM	3	1,298	1,320	4,097	1,225	3,859	95	238	540
36411 67	Replacement	4	1,271	1,433	7,186	685	4,050	748	3,138	2,962
	Automobile miniature other than glass and metal sealed beams:									
36411 33	OEM	4	119,386	117,966	15,890	114,660	15,391	3,306	499	32,187
36411 36	Replacement	4	42,672	45,710	10,001	38,047	9,089	7,663	912	47,368
	Flashlight:									
36411 71	OEM	2	1,203	1,203	219	1,203	219	-	-	1,647
36411 72	Replacement	3	862	842	311	727	291	115	20	2,778
	Radio panel:									
36411 73	OEM	4	3,966	3,793	545	3,715	534	78	11	474
36411 74	Replacement	4	2,148	1,512	258	1,368	240	144	18	2,329
	Subminiature lamps (T-2 and below):									
36411 75	OEM	7	20,803	21,428	1,976	18,253	1,811	3,175	165	12,235
36411 76	Replacement	4	5,709	5,979	1,032	2,004	730	3,975	302	4,984
	All other miniature incandescent, including surgical, medical, and dental instruments ⁴ :									
36411 77	OEM	6	14,466	14,346	3,397	14,332	3,362	14	35	2,645
36411 78	Replacement	4	4,364	2,911	2,916	2,396	2,248	515	668	9,701
	Electric discharge, except Christmas tree	19	164,125	146,655	307,513	137,166	276,453	11,489	31,060	112,971
36411 41	Germicidal, bacterial, end ozone	6	220	165	2,703	134	2,001	51	702	141
36411 42	Sunlamp bulbs	5	120	95	895	93	669	2	26	93
	Fluorescent, hot cathode	9	146,683	131,710	233,239	121,231	212,559	10,479	20,680	103,579
36411 43	Slimline, single pin base, including rapid start.	5	16,294	14,796	37,239	13,352	34,425	1,444	2,814	9,592
36411 46	Circular, including rapid start	2	2,173	1,906	4,530	1,055	2,593	853	1,937	1,889
36411 47	High output 600 millilamp end over, including power grove, VHO, end SHO	6	6,375	7,997	31,385	7,505	29,316	492	2,069	6,296
	Other fluorescent hot cathode.	9	119,841	107,009	160,085	99,319	146,225	7,690	13,660	85,602
	30 watts end below	9	22,607	17,614	51,764	15,352	44,655	2,462	6,909	20,783
36411 48	Compect fluorescent lemps	5	6,666	7,407	29,464	6,396	26,653	1,009	2,611	9,487
36411 49	All other	7	13,919	10,407	22,300	6,954	18,202	1,453	4,098	11,296
	Over 30 watts	5	97,234	69,195	108,321	63,967	101,370	5,228	6,951	65,019
36411 81	U-shaped T6 end T12	2	3,726	3,162	13,051	2,658	11,911	324	1,140	3,025
36411 82	Linear T6 repid start	2	5,680	6,211	12,884	6,075	12,246	136	416	3,720
36411 83	All other above 30 watts	5	67,626	79,602	62,606	75,034	77,211	4,768	5,395	58,274
	Miscellaneous electrical discharge	12	17,102	16,665	70,876	15,706	61,024	957	9,652	9,158
36411 51	Glow	3	10,944	10,959	1,356	10,874	1,166	85	166	4,671
36411 52	General lighting high intensity lamps	6	5,962	5,537	85,849	4,677	56,567	860	9,262	4,239
36411 54	Sodium vapor	3	2,897	2,663	30,983	2,182	26,332	501	4,651	1,930
36411 58	Standerd mercury vapor	5	1,534	1,367	10,575	1,202	9,211	185	1,364	1,150
36411 57	Metal helide	4	1,551	1,467	24,291	1,293	21,044	174	3,247	1,159
36411 53	Sodium, photochemical, cold cathode fluorescent, end other miscellaneous electrical discharge	7	176	169	3,471	157	3,249	12	222	48
36411 55	Christmas tree lamps, ell types ²	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF ELECTRIC LAMPS, BY QUARTER: 1992 and 1991—Continued

[Quantity in thousands of lamps; value in thousands of dollars]

Product code	Product description	Number of companies ¹	Production	Shipments (except shipments from other lamp manufacturers)						Stocks, end of year (quantity)
				Total		Domestic		Export		
				Quantity	Value	Quantity	Value	Quantity	Value	
	1992									
	THIRD QUARTER									
	Ali types ²	32	743,803	801,028	666,222	749,303	811,392	51,723	54,830	657,162
	Photographic incandescent	4	11,043	9,435	10,990	8,341	9,256	1,094	1,734	24,862
36411 23	Photoflash, including blue	3	9,660	8,045	1,281	7,205	1,139	840	142	23,264
36411 27	Projection	3	1,207	1,177	9,154	958	7,687	219	1,487	1,355
36411 25	Photoflood, photoenlarger, and other photolamps	2	178	213	555	178	430	35	125	323
	Large incandescent, except photographic and Christmas tree	13	385,483	429,298	248,880	418,259	235,552	11,037	13,328	403,154
	General lighting:									
	15 to 150 watts, 100 to 130 volts, white lamps	7	170,021	198,004	82,313	197,431	82,152	573	181	157,013
36411 08	15 to 150 watts, 100 to 130 volts, all other	8	128,889	134,712	48,563	129,883	45,280	4,829	1,283	107,864
36411 12	Above 150 watts, 100 to 130 volts	7	2,288	2,511	3,219	2,379	3,083	132	136	7,413
36411 13	Three-way, 100 to 130 volts	4	12,664	12,589	12,022	12,307	11,855	282	167	16,123
	Reflector, 100 to 130 volts:									
	Per type (pressed glass)	7	11,494	13,113	41,022	11,510	38,570	1,603	4,452	11,637
36411 19	R type (blown glass)	7	12,551	13,892	29,509	13,107	28,542	785	967	14,202
36411 15	Infrared (all types)	6	839	993	3,787	947	3,600	46	187	972
36411 16	Traffic and street lighting, 100 to 130 volts	7	1,400	1,394	1,542	1,253	1,392	141	150	2,610
36411 17	Rough and vibration service, 100 to 130 volts	7	5,777	5,659	4,804	5,580	4,735	79	69	7,018
	Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun:									
	General lighting	6	1,988	1,512	7,782	1,402	7,072	110	690	2,559
	Other	4	2,079	2,163	10,969	1,325	7,584	838	3,385	3,072
36411 03	Low voltage display lamps (12V or less)	4	1,812	1,775	5,062	1,019	3,328	756	1,734	2,350
36411 04	All other	3	267	388	5,907	306	4,256	82	1,651	722
36411 07	Decorative under 150 watts, 100 to 130 volts, except A line	4	15,043	15,686	8,041	15,190	7,686	496	355	30,561
36411 18	All other large incandescent (special purpose), including under 15 watt and other than 100 to 130 volts ³	4	22,490	27,068	17,327	25,945	16,001	1,123	1,326	42,012
	Miniature incandescent	8	216,830	216,002	108,396	186,621	94,955	29,381	13,441	132,206
	Automobile glass and metal sealed beams:									
	OEM	3	8,056	7,753	16,985	6,598	14,503	1,155	2,482	2,571
36411 62	Replacement	4	13,106	12,988	47,824	10,835	42,905	2,153	4,919	9,380
	All other glass and metal sealed beams:									
	OEM	3	1,252	1,317	4,051	1,260	3,892	57	159	475
36411 67	Replacement	4	993	1,276	6,215	579	3,552	697	2,663	2,679
	Automobile miniature other than glass and metal sealed beams:									
	OEM	4	106,513	106,166	14,576	100,806	13,688	5,360	888	32,534
36411 36	Replacement	4	46,245	43,243	9,770	32,578	8,430	10,665	1,340	50,370
	Flashlight:									
	OEM	3	1,020	1,024	206	1,024	206	-	-	1,643
36411 72	Replacement	3	97	688	195	592	181	96	14	2,187
	Radio panel:									
	OEM	4	3,272	3,318	429	3,181	415	137	14	428
36411 74	Replacement	4	456	1,180	175	1,130	168	50	7	1,605
	Subminiature lamps (T-2 and below):									
	OEM	7	18,880	19,909	1,819	15,560	1,588	4,349	231	11,206
36411 76	Replacement	4	5,332	5,732	850	1,403	504	4,329	346	4,584
	All other miniature incandescent, including surgical, medical, and dental instruments ⁴ :									
	OEM	6	9,013	8,662	2,601	8,629	2,557	33	44	2,996
36411 78	Replacement	4	2,595	2,746	2,700	2,446	2,366	300	334	9,550
	Electric discharge, except Christmas tree	19	130,247	146,293	297,956	136,082	271,629	10,211	26,327	96,918
	Germicidal, bacterial, and ozone	6	172	169	3,056	121	2,265	48	791	136
36411 42	Sunlamp bulbs	5	98	83	710	78	666	5	44	107
	Fluorescent, hot cathode	9	113,665	132,261	229,462	122,796	210,676	9,465	18,786	84,963
36411 43	Slimline, single pin base, including rapid start	5	12,559	14,553	37,698	13,492	35,564	1,061	2,134	7,598
36411 46	Circular, including rapid start	2	1,581	2,009	4,958	1,271	3,411	738	1,547	1,461
36411 47	High output 800 milliamp end over, including power groove, VHO, and SHO	6	6,802	7,709	29,469	7,352	28,233	357	1,236	5,389
	Other fluorescent hot cathode	9	92,723	107,990	157,337	100,681	143,468	7,309	13,869	70,535
	30 watts and below	9	16,336	17,311	48,306	14,301	40,421	3,010	7,885	19,806
36411 48	Compact fluorescent lamps	5	8,202	6,988	25,748	5,193	21,133	1,795	4,615	10,701
36411 49	All other	7	8,134	10,323	22,558	9,108	19,288	1,215	3,270	9,107
	Over 30 watts	6	76,387	90,679	109,031	86,380	103,047	4,299	5,964	50,727
36411 81	U-shaped T8 and T12	2	2,375	3,206	13,295	3,006	12,543	200	752	2,194
36411 82	Linear T8 rapid start	2	6,112	6,693	13,771	6,500	13,075	193	696	3,139
36411 83	All other above 30 watts	5	67,900	80,780	81,965	76,874	77,429	3,906	4,536	45,394
	Miscellaneous electrical discharge	12	16,312	13,780	64,728	13,087	58,022	693	6,706	11,690
36411 51	Glow	3	11,148	8,653	1,418	8,601	1,247	52	171	7,366
36411 52	General lighting high intensity lamps	6	4,992	4,961	60,079	4,334	53,720	627	6,339	4,270
36411 54	Sodium vapor	3	2,395	2,355	26,958	1,987	23,607	368	3,351	1,970
36411 56	Standard mercury vapor	5	1,333	1,150	9,405	1,000	8,277	150	1,128	1,333
36411 57	Metal halide	4	1,264	1,456	23,716	1,347	21,836	109	1,880	967
36411 53	Sodium, photochemical, cold cathode fluorescent, and other miscellaneous electrical discharge	7	172	166	3,231	152	3,055	14	176	54
36411 55	Christmas tree lamps, all types ²	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF ELECTRIC LAMPS, BY QUARTER: 1992 and 1991—Continued

[Quantity in thousands of lamps; value in thousands of dollars]

Product code	Product description	Number of companies ¹	Production	Shipments (except shipments from other lamp manufacturers)						Stocks, end of year (quantity)
				Total		Domestic		Export		
				Quantity	Value	Quantity	Value	Quantity	Value	
	1992									
	FOURTH QUARTER									
	All types ²	32	905,050	1,002,832	835,254	937,721	756,507	65,111	78,747	558,987
	Photographic incandescent	4	8,786	20,273	15,971	17,445	12,770	2,828	3,201	13,395
36411 23	Photoflash, including blue	3	7,204	18,360	2,986	15,979	2,551	2,381	435	12,048
36411 27	Projection	3	1,281	1,608	12,233	1,216	9,619	392	2,614	1,028
36411 25	Photoflood, photoenlarger, and other photolamps	2	301	305	752	250	600	55	152	319
	Large incandescent, except photographic and Christmas tree	13	472,596	562,743	312,741	543,825	290,428	18,918	22,313	312,607
	General lighting:									
	15 to 150 watts, 100 to 130 volts, white lamps	7	199,872	249,565	74,354	244,391	73,343	5,174	1,011	107,320
36411 08	15 to 150 watts, 100 to 130 volts, all other	8	159,286	171,610	55,849	167,473	54,700	4,137	1,149	95,640
36411 12	Above 150 watts, 100 to 130 volts	7	2,782	4,326	5,338	4,146	5,187	180	151	5,869
36411 13	Three-way, 100 to 130 volts	4	15,432	17,994	16,346	17,781	16,206	213	140	13,561
	Reflector, 100 to 130 volts:									
	Par type (pressed glass)	7	14,109	16,132	49,913	13,437	42,037	2,695	7,876	9,614
36411 14	R type (blown glass)	7	16,045	17,532	36,683	16,429	35,292	1,103	1,391	12,715
36411 15	Infrared (all types)	6	1,887	1,852	5,595	1,758	5,274	94	321	1,007
36411 16	Traffic and street lighting, 100 to 130 volts	7	1,447	1,325	1,208	1,145	1,042	180	166	2,732
36411 17	Rough and vibration service, 100 to 130 volts	7	6,222	7,145	6,005	6,954	5,851	191	154	6,093
	Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun:									
	General lighting	6	1,696	1,820	8,474	1,752	8,054	68	420	2,435
	Other	4	2,810	3,532	16,044	1,439	8,544	2,093	7,500	2,350
36411 03	Low voltage display lamps (12V or less)	4	2,537	3,045	10,447	1,072	3,593	1,973	6,854	1,842
36411 04	All other	3	273	487	5,597	367	4,951	120	646	508
36411 07	Decorative under 150 watts, 100 to 130 volts (except A line)	4	24,848	32,586	15,084	31,984	14,759	602	325	22,823
36411 18	All other large incandescent (special purpose), including under 15 watt and other than 100 to 130 volts ³	4	26,160	37,324	21,848	35,136	20,139	2,188	1,709	30,448
	Miniature incandescent	8	255,959	252,583	145,131	223,248	128,985	29,335	16,146	135,593
	Automobile glass and metal sealed beams:									
	OEM	3	7,988	8,620	18,808	7,647	16,706	973	2,102	1,939
36411 62	Replacement	4	16,383	19,132	73,638	16,948	68,217	2,184	5,421	6,631
	All other glass and metal sealed beams:									
	OEM	3	1,393	1,492	4,439	1,395	4,190	97	249	376
36411 67	Replacement	4	1,117	2,033	9,288	838	4,603	1,195	4,685	1,763
	Automobile miniature other than glass and metal sealed beams:									
	OEM	4	120,744	121,917	16,457	116,112	15,494	5,805	963	31,361
36411 36	Replacement	4	60,497	50,411	12,131	40,212	10,624	10,199	1,507	60,456
	Flashlight:									
	OEM	3	860	863	183	863	183	-	-	1,640
36411 72	Replacement	3	1,212	1,135	339	1,007	317	128	22	2,264
	Radio panel:									
	OEM	4	4,439	4,264	556	4,196	549	68	7	603
36411 74	Replacement	4	1,340	1,694	288	1,495	262	199	26	1,251
	Subminiature lamps (T-2 and below):									
	OEM	7	20,336	20,872	2,038	17,868	1,894	3,004	144	10,670
36411 76	Replacement	4	7,996	6,349	850	1,256	453	5,093	397	6,231
	All other miniature incandescent, including surgical, medical, and dental instruments ⁴ :									
	OEM	6	10,821	10,815	2,946	10,762	2,898	53	48	3,002
36411 78	Replacement	4	833	2,986	3,170	2,649	2,595	337	575	7,406
	Electric discharge, except Christmas tree	19	167,709	167,233	361,411	153,203	324,324	14,030	37,087	97,392
	Germicidal, bacterial, and ozone	6	160	169	3,044	121	2,272	48	772	129
36411 42	Sunlamp bulbs	5	70	81	675	78	644	3	31	96
	Fluorescent, hot cathode	9	151,039	150,646	270,485	137,827	246,026	12,819	24,459	85,374
	Slimline, single pin base, including rapid start	5	17,212	16,531	43,488	15,099	40,587	1,432	2,901	8,279
36411 46	Circular, including rapid start	2	2,169	2,028	5,177	1,367	3,693	661	1,484	1,602
36411 47	High output 800 milliamper and over, including power grove, VHO, and SHO	6	9,126	8,989	34,385	8,417	32,323	572	2,062	5,526
	Other fluorescent hot cathode	9	122,532	123,098	187,435	112,944	169,423	10,154	18,012	69,967
	30 watts and below	9	20,608	21,251	62,041	16,579	51,291	4,672	10,750	19,163
36411 48	Compact fluorescent lamps	5	9,630	9,498	37,450	6,464	30,000	3,034	7,450	10,831
36411 49	All other	7	10,978	11,753	24,591	10,115	21,291	1,638	3,300	8,332
	Over 30 watts	6	101,924	101,847	125,394	96,365	118,132	5,482	7,262	50,804
36411 81	U-shaped T8 and T12	2	3,388	3,515	15,039	3,216	13,892	299	1,147	2,067
36411 82	Linear T8 rapid start	2	9,311	9,194	18,416	8,996	18,020	198	396	3,256
36411 83	All other above 30 watts	5	89,225	89,138	91,939	84,153	86,220	4,985	5,719	45,481
	Miscellaneous electrical discharge	12	16,440	16,337	87,207	15,177	75,382	1,160	11,825	11,793
36411 51	Glow	3	10,312	9,472	1,588	9,395	1,362	77	226	8,206
36411 52	General lighting high intensity lamps	6	5,947	6,687	81,970	5,617	70,579	1,070	11,391	3,530
36411 54	Sodium vapor	3	2,896	3,234	38,409	2,636	32,825	598	5,584	1,632
36411 56	Standard mercury vapor	5	1,310	1,466	11,665	1,211	10,010	255	1,655	1,177
36411 57	Metal halide	4	1,741	1,987	31,896	1,770	27,744	217	4,152	721
36411 53	Sodium, photochemical, cold cathode fluorescent, and other miscellaneous electrical discharge	7	181	178	3,649	165	3,441	13	208	57
36411 55	Christmas tree lamps, all types ²	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF ELECTRIC LAMPS, BY QUARTER: 1992 and 1991—Continued

[Quantity in thousands of lamps; value in thousands of dollars]

Product code	Product description	Number of companies ¹	Production	Shipments (except shipments from other lamp manufacturers)						Stocks, end of year (quantity)
				Total		Domestic		Export		
				Quantity	Value	Quantity	Value	Quantity	Value	
	1991									
	TOTAL									
	All types ²	35	3,228,319	3,297,508	2,718,830	3,085,993	2,479,781	211,515	238,869	556,999
	Photographic incandescent.	4	87,585	78,098	54,941	84,829	45,097	11,267	9,844	14,796
	Photoflash, including blue	3	60,792	89,278	8,839	59,128	7,793	10,150	1,046	12,977
36411 26	AG (all glass) lamps	3	8	50	28	50	26	-	-	121
36411 24	M-types (miniatura)	2	3	2	1	2	1	-	-	11
36411 21	Flash cubes, all types	3	60,730	69,151	8,787	59,001	7,721	10,150	1,046	12,159
36411 22	Other flash lamps	2	51	73	45	73	45	-	-	666
36411 28	Projection, bulk packed	3	1,721	1,100	7,488	1,091	7,410	9	78	255
36411 29	Projection, all other	3	3,962	4,589	35,762	3,841	27,438	948	8,326	1,183
36411 25	Photoflood, photoenlarger, and other photolamps	2	1,090	1,131	2,854	971	2,458	160	396	381
	Large incandescent, except photographic and Christmas tree	13	1,758,639	1,785,668	1,029,623	1,727,843	964,791	57,825	64,832	333,149
	General lighting:									
	15 to 150 watts, 100 to 130 volts, white lamps	7	788,182	782,951	293,481	781,076	292,768	1,875	713	120,042
36411 08	15 to 150 watts, 100 to 130 volts, all other	8	590,202	602,957	195,585	569,100	184,899	33,857	10,886	87,383
36411 12	Above 150 watts, 100 to 130 volts	8	11,168	9,584	11,609	9,200	10,921	384	688	7,672
36411 13	Three-way, 100 to 130 volts	4	53,802	59,856	54,520	58,778	53,554	1,078	966	14,832
	Reflector, 100 to 130 volts:									
	Par type (prasad glass)	7	44,596	50,619	153,965	44,652	128,519	5,967	25,446	9,375
36411 19	R type (blown glass)	7	57,810	57,848	111,981	55,279	107,231	2,369	4,750	13,509
36411 15	Infrared (all types)	5	4,150	4,043	15,470	3,778	14,423	265	1,047	434
36411 16	Traffic and street lighting, 100 to 130 volts	5	4,827	5,471	5,777	5,043	5,323	428	454	2,782
36411 17	Rough and vibration service, 100 to 130 volts	6	25,650	25,351	21,700	24,660	20,768	691	932	6,598
	Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun:									
	General lighting	7	6,843	6,793	35,922	6,144	32,423	649	3,499	1,755
36411 06	All other	3	9,371	8,205	35,851	3,412	27,692	4,793	8,159	1,471
36411 07	Decorative under 150 watts, 100 to 130 volts (except A line)	6	74,536	76,309	35,840	75,716	35,189	593	651	28,949
36411 18	All other large incandescent (special purpose), including under 15 watt and other than 100 to 130 Volts ³	4	87,502	95,881	57,922	91,005	51,281	4,876	6,641	38,346
	Miniatura incandescent	9	850,442	867,980	471,435	761,483	408,390	106,497	63,045	141,920
	Automobile glass and metal sealed beams:									
	OEM	4	36,803	35,584	76,807	28,036	58,157	7,548	18,650	2,692
36411 62	Replacement	4	53,926	57,443	219,609	49,333	199,125	8,110	20,484	6,958
	All other glass and metal sealed beams:									
	OEM	3	5,242	5,918	17,077	5,474	16,028	444	1,049	563
36411 67	Replacement	4	5,080	6,024	24,085	2,722	13,783	3,302	10,302	3,046
	Automobile miniatura other than glass and metal sealed beams:									
	OEM	4	427,607	424,774	56,171	402,124	52,189	22,650	3,982	31,095
36411 36	Replacement	4	161,993	171,901	39,244	133,187	34,295	38,714	4,949	60,944
	Flashlight:									
	OEM	3	4,937	4,937	939	4,937	939	-	-	1,620
36411 72	Replacement	3	2,051	2,561	954	2,138	890	423	64	3,021
	Radio panel:									
	OEM	4	11,076	11,530	1,500	11,405	1,474	125	26	604
36411 74	Replacement	4	3,631	4,455	790	3,922	740	533	50	1,661
	Subminiatura lamps (T-2 and below):									
	OEM	8	61,165	62,725	6,554	58,568	6,229	4,157	325	11,981
36411 76	Replacement	4	22,240	24,938	4,113	7,012	2,552	17,926	1,561	5,455
	All other miniatura incandescent, including surgical, medical, and dental instruments ⁴ :									
	OEM	7	43,581	42,762	12,410	42,617	12,240	145	170	3,046
36411 78	Replacement	5	11,110	12,428	11,182	10,008	9,749	2,420	1,433	9,234
	Electric discharge, except Christmas tree	21	549,673	567,764	1,162,631	531,838	1,061,483	35,926	101,148	67,124
	Germicidal, bacterial, and ozone	4	458	445	5,019	334	3,145	111	1,874	91
36411 42	Sunlamp bulbs	6	471	419	3,011	398	2,864	21	147	66
	Fluorescent, hot cathoda	10	502,034	518,534	895,723	486,328	827,551	32,206	68,172	58,471
36411 43	Slimline, single pin base, including rapid start	7	55,471	57,315	143,849	53,848	137,174	3,467	6,675	8,144
36411 46	Circular, including rapid start	3	6,903	7,470	17,450	5,087	11,171	2,383	6,279	1,561
36411 47	High output 800 milliwatt and over, including power grove, VHO, and SHO	7	28,328	31,346	117,205	29,762	111,476	1,584	5,729	5,667
36411 44	Other fluorescent lamps, below 40 watts	9	71,378	69,346	191,736	60,912	161,200	8,434	30,536	15,136
36411 45	Other fluorescent lamps, 40 watts and over, including preheat rapid start	6	339,954	353,057	425,483	336,719	406,530	16,338	18,953	27,963
	Miscellaneous electrical discharge	15	46,710	48,366	258,878	44,778	227,923	3,588	30,955	8,496
	Glow	3	28,141	27,544	5,030	26,817	4,430	727	600	4,985
36411 52	General lighting high intensity lamps	8	18,313	20,557	245,626	17,714	216,045	2,843	29,581	3,501
36411 53	Sodium, photochemical, cold cathoda fluorescent, and other miscellaneous electrical discharge	7	256	265	8,222	247	7,448	18	774	10
36411 55	Christmas tree lamps, all types ²	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF ELECTRIC LAMPS, BY QUARTER: 1992 and 1991—Continued

[Quantity in thousands of lamps; value in thousands of dollars]

Product code	Product description	Number of companies ¹	Production	Shipments (except shipments from other lamp manufacturers)						Stocks, end of year (quantity)
				Total		Domestic		Export		
				Quantity	Value	Quantity	Value	Quantity	Value	
	1991									
	FIRST QUARTER									
	All types ²	34	812,686	796,523	687,547	748,884	609,215	47,639	58,332	645,499
	Photographic incandescent.	4	13,311	13,604	12,923	9,887	10,489	3,717	2,434	24,660
	Photoflash, including blue	3	11,322	11,901	1,481	8,509	1,115	3,392	366	20,898
36411 26	AG (all glass) lamps	3	-	4	1	4	1	-	-	158
36411 24	M-types (miniature)	2	-	-	-	-	-	-	-	11
36411 21	Flash cubes, all types	3	11,322	11,887	1,473	8,495	1,107	3,392	366	20,020
36411 22	Other flash lamps	2	-	10	7	10	7	-	-	709
36411 28	Projection, bulk packed.	3	189	250	1,529	248	1,511	2	18	1,021
36411 29	Projection, all other	3	1,530	1,196	9,254	911	7,289	285	1,965	2,433
36411 25	Photoflood, photoenlarger, and other photolamps	2	270	257	659	219	574	38	85	308
	Large incandescent, except photographic and Christmas tree	13	450,683	440,760	255,607	434,301	239,681	10,459	15,926	363,636
	General lighting:									
	15 to 150 watts, 100 to 130 volts, white lamps	6	200,992	192,434	73,768	191,922	73,552	512	216	120,544
36411 08	15 to 150 watts, 100 to 130 volts, all other	8	151,344	151,827	50,361	147,311	48,811	4,516	1,550	99,880
36411 12	Above 150 watts, 100 to 130 volts.	6	2,669	2,934	3,490	2,806	3,252	128	238	5,643
36411 13	Three-way, 100 to 130 volts	4	15,049	17,672	15,734	17,320	15,402	352	332	14,884
	Reflector, 100 to 130 volts:									
	Par type (pressed glass)	6	12,458	11,700	33,876	10,287	28,331	1,413	5,545	15,947
36411 19	R type (blown glass)	7	15,965	14,768	28,237	13,985	26,630	783	1,607	13,667
36411 15	Infrared (all types)	5	1,555	1,155	4,128	1,091	3,855	64	273	1,798
36411 16	Traffic and street lighting, 100 to 130 volts.	5	1,051	1,468	1,497	1,399	1,404	69	93	3,039
36411 17	Rough and vibration service, 100 to 130 volts.	6	6,997	7,600	6,533	7,307	6,054	293	479	5,655
	Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun:									
	General lighting	6	2,124	1,714	9,036	1,415	7,589	299	1,447	2,532
36411 06	All other	3	2,048	1,919	7,993	682	5,733	1,237	2,260	1,694
36411 07	Decorative under 150 watts, 100 to 130 volts (except A line)	6	18,224	19,315	8,536	19,185	8,214	130	142	29,401
36411 18	All other large incandescent (special purpose), including under 15 watt and other than 100 to 130 volts ³	4	20,207	20,254	12,598	19,591	10,854	663	1,744	48,952
	Miniature incandescent	9	213,619	206,110	126,402	181,157	112,427	24,953	13,975	170,063
	Automobile glass and metal sealed beams:									
	OEM	4	8,065	7,867	16,772	6,584	13,393	1,283	3,379	1,886
36411 62	Replacement	4	16,323	16,962	65,778	15,171	61,249	1,791	4,529	10,044
	All other glass and metal sealed beams:									
	OEM	3	1,838	1,889	5,068	1,715	4,628	174	440	1,188
36411 67	Replacement	4	1,709	1,479	6,795	765	4,309	714	2,486	4,250
	Automobile miniature other than glass and metal sealed beams:									
	OEM	4	95,106	92,736	12,144	88,045	11,353	4,691	791	33,768
36411 36	Replacement	4	51,429	44,809	10,221	34,882	8,743	9,927	1,478	78,266
	Flashlight:									
	OEM	3	1,327	1,327	255	1,327	255	-	-	1,620
36411 72	Replacement	3	792	685	269	586	251	99	18	3,544
	Radio panel:									
	OEM	4	1,357	1,897	252	1,868	246	29	6	450
36411 74	Replacement	4	1,131	1,200	207	1,043	192	157	15	2,460
	Subminiature lamps (T-2 and below):									
	OEM	8	14,828	14,968	1,536	13,397	1,478	1,581	118	12,488
36411 76	Replacement	4	6,421	5,676	1,221	2,535	970	3,141	251	8,295
	All other miniature incandescent, including surgical, medical, and dental instruments ⁴ :									
	OEM	7	10,034	10,356	2,834	10,315	2,794	41	40	2,209
36411 78	Replacement	5	3,259	4,249	3,050	2,924	2,626	1,325	424	9,595
	Electric discharge, except Christmas tree	21	135,073	132,049	272,615	123,539	246,618	8,510	25,997	87,140
	Germicidal, bacterial, and ozone.	4	51	61	966	31	447	30	519	54
36411 42	Sunlamp bulbs	5	145	104	696	99	664	5	32	63
	Fluorescent, hot cathode	10	122,446	119,492	210,774	111,863	192,809	7,629	17,965	76,315
36411 43	Slimline, single pin base, including rapid start.	7	13,970	14,268	34,442	13,153	32,472	1,115	1,970	9,578
36411 46	Circular, including rapid start.	4	1,533	1,977	4,663	1,235	2,743	742	1,920	1,685
36411 47	High output 800 millilamp and over, including power grove, VHO, and SHO	7	7,633	7,839	29,004	7,406	27,573	433	1,431	8,189
36411 44	Other fluorescent lamps, below 40 watts.	9	17,887	17,469	47,670	15,222	39,268	2,247	8,402	14,314
36411 45	Other fluorescent lamps, 40 watts and over, including preheat rapid start	6	81,423	77,939	94,995	74,847	90,753	3,092	4,242	42,549
	Miscellaneous electrical discharge	15	12,431	12,392	60,179	11,546	52,698	846	7,481	10,708
36411 51	Glow	3	7,669	7,511	1,333	7,366	1,215	145	118	4,283
36411 52	General lighting high intensity lamps	7	4,698	4,816	56,786	4,120	49,651	696	7,135	6,420
36411 53	Sodium, photochemical, cold cathode fluorescent, and other miscellaneous electrical discharge	7	65	65	2,060	60	1,832	5	228	5
36411 55	Christmas tree lamps, all types ²	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF ELECTRIC LAMPS, BY QUARTER: 1992 and 1991—Continued

[Quantity in thousands of lamps; value in thousands of dollars]

Product code	Product description	Number of companies ¹	Production	Shipments (except shipments from other lamp manufacturers)						Stocks, end of year (quantity)
				Total		Domestic		Export		
				Quantity	Value	Quantity	Value	Quantity	Value	
	1991									
	SECOND QUARTER									
	All types ²	34	868,390	747,358	823,359	895,347	561,841	52,011	81,518	757,822
	Photographic incandescent.	4	21,866	21,018	15,450	18,604	12,969	2,414	2,481	24,218
	Photoflash, including blue	3	20,081	19,080	2,388	17,013	2,073	2,067	313	21,875
36411 26	AG (all glass) lamps	3	1	19	12	19	12	-	-	140
36411 24	M-types (miniature)	2	-	-	-	-	-	-	-	11
36411 21	Flash cubes, all types	3	20,060	19,039	2,382	18,972	2,049	2,067	313	21,041
36411 22	Other flash lamps	2	-	22	12	22	12	-	-	683
36411 28	Projection, bulk packad.	3	1,030	308	2,050	304	2,032	2	18	327
36411 29	Projection, all other	3	481	1,315	10,224	1,014	8,173	301	2,051	1,600
36411 25	Photoflood, photoanlarger, and other photolamps	2	294	317	790	273	891	44	99	416
	Large incandescent, except photographic and Christmas trees	13	465,769	384,374	220,782	353,501	206,187	10,873	14,815	462,726
	General lighting:									
	15 to 150 watts, 100 to 130 volts, white lamps	6	205,733	158,491	61,020	158,203	60,877	288	143	168,464
36411 09	15 to 150 watts, 100 to 130 volts, all other	8	156,687	128,584	44,928	123,836	43,568	4,748	1,360	127,785
36411 12	Above 150 watts, 100 to 130 volts.	6	3,583	2,010	2,482	1,892	2,268	118	194	7,416
36411 13	Thraa-way, 100 to 130 volts	4	15,504	11,491	10,601	11,173	10,349	318	252	19,024
	Raflactor, 100 to 130 volts:									
36411 14	Par type (prassad glass)	6	8,866	10,364	31,319	8,828	25,663	1,536	5,656	14,544
36411 19	R type (blown glass)	7	17,913	13,260	26,169	12,542	24,833	718	1,336	18,976
36411 15	Infrared (all types)	5	731	701	3,492	601	3,034	100	458	1,286
36411 16	Traffic and street lighting, 100 to 130 volts.	5	993	1,401	1,690	1,321	1,614	80	76	2,591
36411 17	Rough and vibration service, 100 to 130 volts.	6	7,967	6,322	5,400	8,144	5,204	178	196	7,301
	Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun:									
36411 05	General lighting	5	2,733	1,670	8,857	1,433	7,846	237	1,011	3,574
36411 06	All other	3	2,261	1,599	8,623	796	6,742	803	1,881	1,144
36411 07	Decorative under 150 watts, 100 to 130 volts (except A line)	6	19,624	12,879	6,158	12,709	5,970	170	188	36,376
36411 18	All other large incandescent (special purpose), including under 15 watt and other than 100 to 130 volts ³	4	23,147	15,602	10,063	14,023	8,199	1,579	1,864	54,245
	Miniature incandescent	9	231,965	222,650	101,191	194,063	83,213	28,587	17,978	176,227
	Automobile glass and metal sealed beams:									
36411 61	OEM	4	10,066	9,881	20,785	7,481	15,383	2,400	5,402	1,856
36411 62	Replacement	4	13,026	11,299	38,934	8,538	32,003	2,761	6,931	11,563
	All other glass and metal sealed beams:									
36411 65	OEM	3	763	1,276	3,742	1,219	3,597	57	145	675
36411 67	Replacement	4	920	1,251	3,176	615	1,338	636	1,838	3,889
	Automobile miniature other than glass and metal sealed beams:									
36411 33	OEM	4	120,729	114,016	14,861	105,074	13,400	8,942	1,461	37,345
36411 36	Replacement	4	40,505	39,643	9,557	31,473	8,104	8,170	1,453	78,334
	Flashlight:									
36411 71	OEM	3	1,393	1,393	272	1,393	272	-	-	1,620
36411 72	Replacement	3	665	414	164	321	142	93	22	3,795
	Radio panel:									
36411 73	OEM	4	3,439	3,374	423	3,339	416	35	7	583
36411 74	Replacement	4	824	1,020	202	940	192	80	10	2,256
	Subminiature lamps (T-2 and below):									
36411 75	OEM	7	15,671	16,783	1,768	15,390	1,652	1,393	116	12,257
36411 76	Replacement	4	5,281	4,596	666	1,160	434	3,436	232	9,583
	All other miniature incandescent, including surgical, medical, and dental instruments ⁴ :									
36411 77	OEM	7	16,043	14,964	4,050	14,902	3,993	62	57	3,123
36411 78	Replacement	5	2,640	2,740	2,591	2,218	2,287	522	304	9,348
	Electric discharge, except Christmas trees	21	148,790	139,316	285,936	129,179	259,492	10,137	26,444	94,651
36411 41	Germicidal, bacterial, and ozone.	4	79	61	858	25	216	36	642	71
36411 42	Sunlamp bulbs	5	98	97	828	91	777	6	51	82
	Fluorescent, hot cathoda	10	135,808	125,566	220,757	116,441	202,375	9,125	18,382	86,483
36411 43	Slimina, single pin base, including rapid start.	7	15,256	13,652	34,490	12,813	32,906	839	1,584	11,290
36411 46	Circular, including rapid start.	4	2,158	2,031	4,630	1,366	2,939	665	1,691	1,812
36411 47	High output 800 millilamp and over, including power grove, VHO, and SHO	7	7,438	7,481	28,367	7,102	26,938	379	1,429	8,224
36411 44	Other fluorescent lamps, below 40 watts.	9	19,320	16,965	48,192	14,704	39,785	2,261	8,407	16,967
36411 45	Other fluorescent lamps, 40 watts and over, including prahaat rapid start	6	91,636	85,437	105,078	80,456	99,807	4,981	5,271	48,790
	Miscellaneous electrical discharge	15	12,805	13,592	63,493	12,622	56,124	970	7,369	8,035
36411 51	Glow	3	8,709	8,609	1,615	8,310	1,371	299	244	3,900
36411 52	General lighting high intensity lamps	7	4,030	4,908	59,403	4,242	52,571	666	6,832	4,731
36411 53	Sodium, photochemical, cold cathoda fluorescent, and other miscellaneous electrical discharge	7	66	75	2,475	70	2,182	5	293	4
36411 55	Christmas tree lamps, all types ²	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF ELECTRIC LAMPS, BY QUARTER: 1992 and 1991—Continued

[Quantity in thousands of lamps; value in thousands of dollars]

Product code	Product description	Number of companies ¹	Production	Shipments (except shipments from other lamp manufacturers)						Stocks, and of year (quantity)
				Total		Domestic		Export		
				Quantity	Value	Quantity	Value	Quantity	Value	
	1991									
	THIRD QUARTER									
	All types ²	34	874,432	778,483	824,585	733,638	573,833	42,827	50,752	857,870
	Photographic Incandescent.	4	14,333	18,157	11,284	14,651	9,216	1,506	2,068	22,182
	Photoflash, including blue	3	12,830	14,742	2,127	13,312	1,949	1,430	178	19,958
36411 26	AG (all glass) lamps	3	7	18	7	18	7	-	-	129
36411 24	M-types (miniature)	2	3	1	1	1	1	-	-	13
36411 21	Flash cubes, all types	3	12,769	14,707	2,104	13,277	1,926	1,430	178	19,098
36411 22	Other flash lamps	2	51	16	15	16	15	-	-	718
36411 28	Projection, bulk packed.	3	269	254	1,945	253	1,938	1	7	342
36411 29	Projection, all other	3	1,015	902	6,536	861	4,761	41	1,775	1,506
36411 25	Photoflood, photoenlarger, and other photolamps	2	219	259	676	225	568	34	108	376
	Large incandescent, except photographic and Christmas tree	13	345,193	410,964	232,026	401,641	218,466	9,323	13,560	396,807
	General lighting:									
	15 to 150 watts, 100 to 130 volts, white lamps	8	172,073	185,036	66,431	184,662	66,364	374	67	156,127
36411 08	15 to 150 watts, 100 to 130 volts, all other	8	106,961	134,064	41,765	130,099	40,554	3,965	1,211	100,779
36411 12	Above 150 watts, 100 to 130 volts.	6	2,047	1,818	2,319	1,743	2,168	75	151	7,645
36411 13	Three-way, 100 to 130 volts	4	7,493	11,920	10,939	11,684	10,691	236	248	14,566
	Reflector, 100 to 130 volts:									
36411 14	Par type (pressed glass)	6	10,062	12,003	37,174	10,622	30,479	1,381	6,695	12,629
36411 19	R type (blown glass)	7	10,670	12,838	25,041	12,364	24,000	474	1,041	16,874
36411 15	Infrared (all types)	5	764	678	2,922	637	2,780	41	142	828
36411 16	Traffic and street lighting, 100 to 130 volts.	5	1,171	1,440	1,369	1,345	1,296	95	73	2,321
36411 17	Rough and vibration service, 100 to 130 volts.	6	5,041	5,055	4,375	4,938	4,233	117	142	7,287
	Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun:									
36411 05	General lighting	5	104	1,270	7,407	1,192	6,950	78	457	2,050
36411 06	All other	3	2,723	2,027	8,689	851	7,008	1,176	1,681	1,840
36411 07	Decorative under 150 watts, 100 to 130 volts (except A line)	6	9,252	16,843	8,195	16,689	8,033	154	162	28,777
36411 18	All other large incandescent (special purpose) including under 15 watt and other than 100 to 130 volts ³	4	16,832	25,972	15,400	24,815	13,910	1,157	1,490	45,084
	Miniature incandescent	9	190,999	211,246	104,061	186,707	89,638	24,539	14,423	157,945
	Automobile glass and metal sealed beams:									
36411 61	OEM	4	8,106	8,495	18,672	6,617	13,860	1,878	4,812	1,467
36411 62	Replacement	4	11,039	11,240	43,742	9,495	38,913	1,745	4,829	11,362
	All other glass and metal sealed beams:									
36411 65	OEM	3	1,174	1,267	3,759	1,175	3,581	92	178	582
36411 67	Replacement	4	959	1,196	5,274	561	3,265	635	2,009	3,652
	Automobile miniature other than glass and metal sealed beams:									
36411 33	OEM	4	104,662	107,391	14,270	102,757	13,414	4,632	856	34,616
36411 36	Replacement	4	28,112	42,772	9,236	32,795	8,439	9,977	797	65,674
	Flashlight:									
36411 71	OEM	3	992	992	193	992	193	-	-	1,620
36411 72	Replacement	3	275	717	253	595	241	122	12	3,399
	Radio panel:									
36411 73	OEM	4	2,841	2,874	396	2,853	392	21	4	550
36411 74	Replacement	4	890	950	172	919	169	31	3	2,160
	Subminiature lamps (T-2 and below):									
36411 75	OEM	8	15,284	15,662	1,654	15,054	1,608	608	46	11,815
36411 76	Replacement	4	4,502	6,443	1,164	1,688	586	4,755	578	7,642
	All other miniature incandescent, including surgical, medical, and dental instruments ⁴ :									
36411 77	OEM	6	8,927	8,833	2,694	8,792	2,655	41	39	3,122
36411 78	Replacement	5	3,236	2,414	2,582	2,414	2,322	-	260	10,284
	Electric discharge, except Christmas tree	21	123,907	138,096	277,214	130,637	256,513	7,459	20,701	80,936
36411 41	Germicidal, bacterial, and ozone.	4	144	104	933	90	727	14	206	112
36411 42	Sunlamp bulbs	5	118	104	691	99	659	5	32	74
	Fluorescent, hot cathode	10	113,294	127,326	216,398	120,656	202,868	6,670	13,530	74,065
36411 43	Simline, single pin base, including rapid start.	7	11,664	13,811	35,220	13,247	34,101	564	1,119	9,148
36411 46	Circular, including rapid start.	4	1,428	1,516	3,492	1,085	2,420	431	1,072	1,723
36411 47	High output 800 milliamper and over, including power grove, VHO, and SHO	7	5,719	7,491	27,766	7,188	26,667	303	1,099	6,528
36411 44	Other fluorescent lamps, below 40 watts	9	18,809	16,055	43,799	14,590	38,126	1,465	5,673	18,576
36411 45	Other fluorescent lamps, 40 watts and over, including preheat rapid start	6	75,674	88,453	106,121	84,546	101,554	3,907	4,567	38,090
	Miscellaneous electrical discharge	15	10,351	10,562	59,192	9,792	52,259	770	6,933	6,685
36411 51	Glow	3	5,824	5,726	1,043	5,582	923	144	120	2,255
36411 52	General lighting high intensity lamps	7	4,483	4,773	56,139	4,151	49,456	622	6,683	4,424
36411 53	Sodium, photochemical, cold cathoda fluorescent, and other miscellaneous electrical discharge	7	64	63	2,010	59	1,880	4	130	6
36411 55	Christmas tree lamps, all types ²	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF ELECTRIC LAMPS, BY QUARTER: 1992 and 1991—Continued

[Quantity in thousands of lamps; value in thousands of dollars]

Product code	Product description	Number of companies ¹	Production	Shipments (except shipments from other lamp manufacturers)						Stocks, end of year (quantity)
				Total		Domestic		Export		
				Quantity	Value	Quantity	Value	Quantity	Value	
	1991									
	FOURTH QUARTER									
	All types ²	34	870,838	977,184	803,139	908,126	734,872	69,038	68,267	556,989
	Photographic incandescent	4	18,055	25,317	15,284	21,687	12,423	3,630	2,861	14,796
	Photoflash, including blue	3	18,579	23,553	2,845	20,292	2,656	3,261	189	12,977
36411 26	AG (all glass) lamps	3	-	9	8	9	8	-	-	121
36411 24	M-types (miniature)	1	-	1	-	1	-	-	-	11
36411 21	Flesh cubes, all types	3	18,578	23,518	2,828	20,257	2,639	3,261	189	12,159
36411 22	Other flesh lamps	2	-	25	11	25	11	-	-	686
36411 28	Projection, bulk pecked	3	233	290	1,962	288	1,929	4	33	255
36411 29	Projection, ell other	3	938	1,178	9,748	855	7,213	321	2,535	1,183
36411 25	Photoflood, photoenlarger, and other photolamps	2	307	298	729	254	825	44	104	381
	Large incandescent, except photographic and Christmas tree	13	497,021	585,570	321,208	538,400	300,477	27,170	20,731	333,149
	General lighting:									
	15 to 150 watts, 100 to 130 volts, white lamps	8	209,384	246,990	92,262	248,289	91,975	701	287	120,042
36411 08	15 to 150 watts, 100 to 130 volts, all other	8	175,210	188,482	58,531	187,854	51,766	20,628	8,765	87,383
36411 09	Above 150 watts, 100 to 130 volts	6	2,889	2,822	3,338	2,759	3,233	63	105	7,672
36411 12	Three-way, 100 to 130 volts	4	15,756	18,773	17,246	18,601	17,112	172	134	14,832
	Reflector, 100 to 130 volts:									
	Par type (pressed glass)	6	13,210	18,552	51,598	14,915	44,064	1,637	7,550	9,376
36411 14	R type (blown glass)	7	13,282	16,782	32,534	18,368	31,768	394	766	13,509
36411 15	Infrared (all types)	5	1,100	1,509	4,928	1,449	4,754	60	174	434
36411 16	Traffic and street lighting, 100 to 130 volts	5	1,612	1,162	1,221	978	1,009	184	212	2,782
36411 17	Rough and vibration service, 100 to 130 volts	6	5,645	6,374	5,392	6,271	5,277	103	115	6,598
	Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun:									
	General lighting	5	1,882	2,139	10,622	2,104	10,038	35	584	1,755
36411 05	All other	3	2,339	2,660	10,546	1,083	8,209	1,577	2,337	1,471
36411 07	Decorative under 150 watts, 100 to 130 volts (except A line)	8	27,436	27,272	13,131	27,133	12,972	139	159	28,949
36411 18	All other large incandescent (special purpose), including under 15 watt and other than 100 to 130 volts ³	4	27,316	34,053	19,861	32,576	18,318	1,477	1,543	38,346
	Miniature incandescent	9	213,859	227,974	139,781	199,556	123,112	28,418	16,669	141,920
	Automobile glass and metal sealed beams:									
	OEM	4	10,566	9,341	20,578	7,354	15,521	1,987	5,057	2,692
36411 61	Replacement	4	13,538	17,942	71,155	16,129	66,960	1,813	4,195	6,958
	All other glass and metal sealed beams:									
	OEM	3	1,467	1,486	4,508	1,365	4,222	121	286	563
36411 62	Replacement	4	1,492	2,098	8,840	781	4,871	1,317	3,969	3,046
	Automobile miniature other than glass and metal sealed beams:									
	OEM	4	107,110	110,631	14,896	106,248	14,022	4,383	874	31,095
36411 33	Replacement	4	41,947	44,677	10,230	34,037	9,009	10,640	1,221	60,944
	Fleashlight:									
	OEM	2	1,225	1,225	219	1,225	219	-	-	1,620
36411 71	Replacement	3	319	745	268	636	256	109	12	3,021
	Radio panel:									
	OEM	4	3,439	3,385	429	3,345	420	40	9	604
36411 72	Replacement	4	786	1,285	209	1,020	187	265	22	1,661
	Subminiature lamps (T-2 and below):									
	OEM	7	15,382	15,302	1,596	14,727	1,551	575	45	11,981
36411 73	Replacement	4	6,036	8,223	1,062	1,629	562	6,594	500	5,455
	All other miniature incandescent, including surgical, medical, and dental instruments ⁴ :									
	OEM	7	8,577	8,609	2,832	8,608	2,798	1	34	3,046
36411 74	Replacement	5	1,975	3,025	2,959	2,452	2,514	573	445	9,234
	Electric discharge, except Christmas tree	21	141,903	158,503	326,866	148,483	298,860	9,820	28,006	67,124
	Germicidal, bacterial, and ozone	4	184	219	2,262	188	1,755	31	507	91
36411 41	Sunlamp bulbs	5	110	114	796	109	764	5	32	66
	Fluorescent, hot cathode	10	130,486	146,150	247,794	137,368	229,499	8,782	18,295	58,471
36411 42	Silimine, single pin base, including rapid start	7	14,581	15,584	39,697	14,635	37,695	949	2,002	8,144
36411 43	Circular, including rapid start	4	1,784	1,946	4,665	1,401	3,069	545	1,586	1,561
36411 44	High output 800 millilamp end over, including power grove, VHO, and SHO	7	7,538	8,535	32,068	8,066	30,298	469	1,770	5,667
36411 45	Other fluorescent lamps, below 40 watts	9	15,362	18,857	52,075	16,396	44,021	2,461	8,054	15,136
	Other fluorescent lamps, 40 watts and over, including preheat rapid start	6	91,221	101,228	119,289	96,870	114,416	4,358	4,873	27,963
	Miscellaneous electrical discharge	15	11,123	11,820	76,014	10,818	66,842	1,002	9,172	8,496
36411 51	Glow	3	5,939	5,698	1,039	5,559	921	139	118	4,965
36411 52	General lighting high intensity lamps	7	5,123	6,060	73,298	5,201	64,367	859	8,931	3,501
36411 53	Sodium, photochemical, cold cathode fluorescent, and other miscellaneous electrical discharge	7	61	62	1,677	58	1,554	4	123	10
36411 55	Christmas tree lamps, all types ²	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

Note: Beginning stocks, plus production, minus shipments, do not necessarily equal ending stocks.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

¹Number of companies engaged in the production, shipments, or stocks of each line. ²Total does not include Christmas tree lamps. ³Includes lamps for special services such as sign and display lighting, aviation, street, railway, spot and flood lighting, train, country home and showcase lighting, other items for special application, and large incandescent lamps under 15 watts and other than 100 to 130 volts. ⁴Includes lamps for use in toys, pin games, surgical, medical, and dental instruments, and for special applications.

Table 9. **SHIPMENTS OF ELECTRIC LAMPS, AS REPORTED IN CURRENT INDUSTRIAL REPORT MQ36B: 1983 TO 1992**

[Quantity in millions of lamps; value in millions of dollars]

Shipments of electric lamps	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
Quantity	3,422.1	3,297.5	3,318.5	3,429.5	3,510.2	3,399.4	3,421.3	3,472.0	3,723.4	3,615.9
Value	2,854.3	2,718.6	2,679.3	2,689.9	2,730.2	2,681.5	2,610.1	2,669.2	2,661.8	2,277.1

Note: These data do not include Christmas tree lamps or cold cathode fluorescent lamps.

Table 10. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF ELECTRIC LAMPS: 1992 AND 1991**

[Quantity in thousands of lamps; value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Percent exports to manufacturers' shipments		Imports for consumption ^{1 3}		Apparent consumption ⁴		Percent imports to apparent consumption	
	Quantity	Value f.o.b. plant	Quantity ²	Value at port ²	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992												
Electric filament lamps and electric discharge lamps, including ultraviolet and infrared lamp and photoflash lamps; electric luminescent lamps; and arc lamps	3,422,083	2,854,289	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Photographic incandescent: Photoflash, including blue	50,847	7,180	2,523	1,525	5	21	6,532	3,360	54,856	9,015	12	37
Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun	16,457	80,991	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Large incandescent, except photographic and Christmas tree	1,810,318	1,011,024	35,813	49,595	2	5	563,486	161,534	2,337,991	1,122,963	24	14
Miniature incandescent: Glass and metal sealed beams, all types	104,431	340,383	31,904	108,843	31	32	14,282	43,597	86,809	275,137	16	16
All other miniature other than glass and metal sealed beams	839,299	144,305	31,995	23,213	4	16	⁵ 546,629	⁵ 98,623	1,362,715	219,715	40	45
Electric discharge, except Christmas tree:												
Fluorescent, hot cathode	536,141	964,307	41,095	90,964	8	9	64,898	142,466	559,944	1,015,809	12	14
All other electrical discharge ..	64,590	306,099	5,391	75,934	8	25	19,145	84,007	78,344	314,172	24	27
Christmas tree lamps, all types ..	(D)	(D)	(⁶)	(⁶)	(NA)	(NA)	277,896	27,575	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 10. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF ELECTRIC LAMPS: 1992 AND 1991—Continued**

[Quantity in thousands of lamps; value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Percent exports to manufacturers' shipments		Imports for consumption ^{1 3}		Apparent consumption ⁴		Percent imports to apparent consumption	
	Quantity	Value f.o.b. plant	Quantity ²	Value at port ²	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1991												
Electric filament lamps and electric discharge lamps, including ultraviolet and infrared lamps and photoflash lamps; electric luminescent lamps; and arc lamps	3,297,508	2,718,630	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Photographic incandescent:												
Photoflash, including blue	69,276	8,839	3,258	1,922	5	22	6,066	3,366	72,084	10,283	8	33
Tungsten halogen (quartz iodine), excluding 650 watt lamp used in sungun	14,998	71,773	(NA)	(NA)	(NA)	(NA)	18,351	25,513	(NA)	(NA)	(NA)	(NA)
Large incandescent, except photographic and Christmas tree	1,777,490	1,003,952	22,886	35,416	1	4	107,011	48,437	1,861,615	1,016,973	6	5
Miniature incandescent:												
Glass and metal sealed beams, all types	104,969	337,578	33,327	112,233	32	33	7,223	23,377	78,865	248,722	9	9
All other miniature other than glass and metal sealed beams	763,011	133,857	28,244	17,188	4	13	71,349	9,058	806,116	125,727	9	7
Electric discharge, except Christmas tree:												
Fluorescent, hot cathode	518,534	895,723	31,067	69,194	6	8	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other electrical discharge . .	49,230	266,908	6,660	73,054	14	27	18,980	69,646	61,550	263,500	31	26
Christmas tree lamps, all types . .	(D)	(D)	(⁶)	(⁶)	(NA)	(NA)	262,534	26,616	(NA)	(NA)	(NA)	(NA)

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available.

¹For comparison of SIC-based product codes with Schedule B export numbers and HTSUSA import numbers, see appendix B.²Source: Bureau of Census report EM 545, *U.S. Exports*.³Source: Bureau of Census report IM 145, *U.S. Imports for Consumption*.⁴Apparent consumption is derived by subtracting exports from the total of manufacturers' shipments plus imports.⁵Not exactly comparable as imports and exports included nonautomotive sealed beams, which would be reported under SIC-based codes 36411 77 and 36411 78.⁶Exports of Christmas tree lights are included in 8539.22.4000.

HISTORICAL NOTES

Data on electric lamps have been collected by the Bureau of the Census since 1943. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

FUNDING

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CONTACT FOR DATA USERS

For additional information about these data, contact Jack Matthews, 301-763-1513.

7.4 FLUORESCENT LAMP BALLASTS

INTRODUCTION

These data cover all companies engaged in the manufacture of fluorescent lamp ballasts. The statistics were collected by mail on Bureau of the Census quarterly Form MQ36C, Fluorescent Lamp Ballasts. The survey panel includes all known producers of this product, approximately 12 companies.

SUMMARY OF FINDINGS

The value of manufacturers' shipments of fluorescent lamp ballasts amounted to \$812 million in 1992, an increase of 13 percent over shipments of \$718 million in 1991. The quantity of fluorescent lamp ballasts shipped increased to 97 million units in 1992, from 89 million units in 1991. Corrected power-factor types accounted for 57 percent of the quantity and 58 percent of the value of shipments of all fluorescent lamp ballasts during the year 1992. For 1992, the quantity of shipments for corrected power-factor lamp ballasts decreased less than 1 percent; however, that for uncorrected power-factor ballasts increased 14 percent, compared with 1991; the dollar value of shipments of the former type showed a 2-percent decrease, but the dollar

value of the latter type showed a 12-percent increase. The value of shipments of electronic ballasts was \$275 million in 1992, compared with \$180 million in 1991.

EXPLANATION OF TERMS

Corrected Power-Factor Ballasts. Any ballast with a power factor of 85 percent or above.

Uncorrected Power-Factor Ballasts. Any ballast with a power factor less than 85 percent.

Rapid Start. Includes ballasts of all voltage and frequency ratings for operation of all lamps designed for cathode preheating without the use of starters.

Switch Start. Includes ballasts of all voltage and frequency ratings for operation of all lamps of the switch type, except ballasts with preheat windings.

Slimline and Instant Start. Includes ballasts of all voltage and frequency ratings for operation of all hot cathode lamps which do not utilize preheating of cathodes.

All Other. Includes ballasts of all voltage and frequency ratings not classified above. Specifically, includes ballasts with preheat windings for fast starting of standard switch start lamps (trigger start, quick start, etc.), ballasts for dc operation, and cold cathode ballasts.

Table 11. **QUANTITY AND VALUE OF SHIPMENTS OF UNCORRECTED AND CORRECTED POWER-FACTOR TYPE FLUORESCENT BALLASTS: 1981 TO 1992**

[Quantity in 1,000 ballasts; value in \$1,000]

Year	Total		Uncorrected power-factor type		Corrected power-factor type		Electronic type	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992.....	97,034	812,287	28,363	68,771	55,379	468,940	13,292	274,576
1991.....	88,729	718,317	24,919	61,413	55,467	476,867	8,343	180,037
1990.....	81,364	615,569	22,556	54,403	55,807	491,878	3,001	69,288
1989.....	77,702	521,301	18,011	41,667	58,265	439,818	1,426	39,816
1988.....	75,676	476,375	17,813	40,916	56,799	409,954	1,064	25,505
1987.....	74,948	436,045	19,542	42,814	54,754	378,113	652	15,118
1986.....	69,840	407,906	17,370	38,601	52,039	357,470	431	11,835
1985.....	70,054	398,895	18,456	39,899	51,598	358,996	(¹)	(¹)
1984.....	67,519	392,072	18,085	39,265	49,434	352,807	(¹)	(¹)
1983.....	60,825	337,361	18,272	36,170	42,553	301,191	(¹)	(¹)
1982.....	57,004	310,598	17,652	35,257	39,352	275,341	(¹)	(¹)
1981.....	63,907	326,978	21,350	43,038	42,557	283,940	(¹)	(¹)

¹Data for electronic type were not collected separately prior to 1986.

Table 12. QUANTITY AND VALUE OF SHIPMENTS, BY TYPE OF BALLAST: 1992 AND 1991

[Quantity in 1,000 ballasts; value in \$1,000]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992											
36124 —	Total	97,034	812,287	25,088	191,471	23,914	189,259	23,587	203,834	24,465	227,723
	Uncorrected power-factor type ...	28,363	68,771	7,776	16,595	7,103	16,757	8,598	18,030	8,884	17,389
	Switch start	18,881	25,932	4,375	8,370	4,413	7,152	3,948	8,157	3,927	6,253
36124 62	20 watt and less	14,954	20,897	3,800	5,114	3,989	5,783	3,587	4,948	3,818	5,072
36124 63	21 to 40 watt	1,707	5,035	575	1,258	444	1,389	379	1,209	309	1,181
36124 65	Above 40 watt	-	-	-	-	-	-	-	-	-	-
36124 61	Rapid start AND										
36124 66	Other than rapid and switch start	11,702	42,839	3,403	12,225	2,690	9,605	2,652	9,873	2,957	11,136
	Corrected power-factor type	55,379	468,940	14,932	124,842	13,870	111,931	13,328	112,298	13,249	119,869
	Slimline and instant start	9,549	118,581	2,770	33,701	2,224	27,069	2,233	27,308	2,322	30,503
36124 67	Two-lamp 96T12 and 72T12 ...	8,571	107,893	2,478	30,673	2,005	24,702	1,985	24,582	2,103	27,936
36124 68	Other	978	10,688	292	3,028	219	2,367	248	2,726	219	2,567
	Rapid start	44,820	343,846	11,921	89,639	11,369	83,077	10,837	83,320	10,693	87,810
36124 71	Two-lamp, 40 watt	36,122	236,558	9,671	61,819	8,916	57,284	8,826	57,875	8,709	59,580
	All other rapid start	8,698	107,288	2,250	27,820	2,453	25,793	2,011	25,445	1,984	28,230
36124 72	800 to 1,000 mA	2,939	55,670	705	14,464	934	12,921	602	12,671	698	15,614
36124 73	1,500 mA	285	10,469	76	2,745	71	2,516	68	2,454	70	2,754
36124 74	Other	5,474	41,149	1,469	10,611	1,448	10,356	1,341	10,320	1,216	9,862
	Switch start	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
36124 76	Two-lamp 40 watt AND										
36124 81	Other, except 2-lamp 40 watt	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
36124 79	All other corrected power factor type	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Electronic type	13,292	274,576	2,358	48,034	2,941	60,571	3,661	75,506	4,332	90,465
36124 83	Preheat or rapid start lamp up through 40 watt	12,001	242,448	2,114	42,013	2,608	52,054	3,314	66,702	3,965	81,679
36124 85	Single-pin slimline, instant start lamp AND										
36124 87	Rapid start lamp operating at 800 mA and above	1,291	32,128	244	6,021	333	8,517	347	8,804	367	8,786
1991											
36124 —	Total	88,729	718,317	23,011	184,811	22,998	189,905	21,708	178,363	21,012	165,238
	Uncorrected power-factor type ...	24,919	61,413	6,716	16,979	6,634	15,884	5,543	13,909	6,026	14,641
	Switch start	13,868	21,612	3,679	5,775	3,793	5,742	3,010	4,931	3,386	5,164
36124 62	20 watt and less	12,154	17,199	3,200	4,518	3,241	4,527	2,710	4,015	3,003	4,139
36124 63	21 to 40 watt	1,714	4,413	479	1,257	552	1,215	300	916	383	1,025
36124 65	Above 40 watt	-	-	-	-	-	-	-	-	-	-
36124 61	Rapid start AND										
36124 66	Other than rapid and switch start	11,051	39,801	3,037	11,204	2,841	10,142	2,533	8,978	2,640	9,477
	Corrected power-factor type	55,467	476,867	14,289	124,447	13,857	119,440	14,184	120,759	13,137	112,221
	Slimline and instant start	9,591	121,981	2,502	32,194	2,339	30,002	2,386	30,380	2,364	29,405
36124 67	Two-lamp 96T12 and 72T12 ...	8,658	111,610	2,272	29,651	2,126	27,582	2,144	27,675	2,116	26,702
36124 68	Other	933	10,371	230	2,543	213	2,420	242	2,705	248	2,703
	Rapid start	45,367	351,591	11,691	91,601	11,415	88,750	11,645	89,421	10,616	81,819
36124 71	Two-lamp, 40 watt	37,016	249,060	9,529	64,738	9,332	63,559	9,590	64,284	8,565	56,479
	All other rapid start	8,351	102,531	2,162	26,863	2,083	25,191	2,055	25,137	2,051	25,340
36124 72	800 to 1,000 mA	2,552	51,661	655	13,511	623	12,171	605	12,652	669	13,327
36124 73	1,500 mA	301	11,006	77	2,850	77	2,815	72	2,652	75	2,689
36124 74	Other	5,498	39,864	1,430	10,502	1,383	10,205	1,378	9,833	1,307	9,324
	Switch start	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
36124 76	Two-lamp 40 watt AND										
36124 81	Other, except 2-lamp 40 watt	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
36124 79	All other corrected power factor type	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Electronic type	8,343	180,037	2,006	43,385	2,507	54,581	1,981	43,695	1,849	38,376
36124 83	Preheat or rapid start lamp up through 40 watt	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	1,775	38,099	1,654	33,421
36124 85	Single-pin slimline, instant start lamp	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	149	3,784	144	3,435
36124 87	Rapid start lamp operating at 800 mA and above ¹	8,343	180,037	2,006	43,385	2,507	54,581	57	1,812	51	1,520

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

¹For 1991 total, first quarter and second quarter data for 36124 83, "Preheat or rapid start lamp up through 40 watts," 36124 85, "Single-pin slimline instant start lamp," and 36124 87 "Rapid start lamp operating at 800 mA and above" were combined to avoid disclosing figures for individual companies.

Table 13. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF FLUORESCENT LAMP BALLASTS: 1992 AND 1991**

[Thousands of dollars]

Product code ¹	Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Imports for consumption ²	
		Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	c.i.f. and calculated duty
36124 —	Fluorescent lamp ballasts 1992 1991	97,034 88,729	812,287 718,317	³ 10,382 ³ 6,142	³ 64,789 ³ 38,778	³ 52,977 ³ 35,808	³ 277,672 ³ 152,194

¹Source: Bureau of the Census report EM 545, *U.S. Exports*. The Schedule B export number is 8504.10.0000.²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*. The HTSUSA import number is 8504.10.0000. This represents the c.i.f. and calculated duty.³Exports/imports are overstated due to the inclusion of specialty transformers classified in product code 36125.

HISTORICAL NOTES

Data on fluorescent lamp ballasts have been collected by the Bureau of the Census since 1955. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact the Bureau of Census, Data User Services Division, 301-763-4100.

FUNDING

The MQ36C survey is funded, in part, by the Certified Ballasts Manufacturers Association.

CONTACT FOR DATA USERS

For additional information about these data, contact Robert Wright, 301-763-5573.

7.5 WIRING DEVICES AND SUPPLIES

INTRODUCTION

These data cover firms engaged in the manufacture of current-carrying wiring devices, noncurrent carrying devices, and conduit and conduit fittings in the United States. Very small firms (generally less than five employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies are excluded. The statistics were collected by mail on Bureau of the Census annual Form MA36K, Wiring Devices and Supplies. The survey panel includes all known manufacturers of wiring and supplies, except the very small firms excluded from the scope of the survey. Approximately 475 companies are included. No estimate is derived for the small firms excluded from the survey.

SUMMARY OF FINDINGS

During 1992, manufacturers' shipment of wiring devices and supplies totaled \$7.2 billion, an increase of 5 percent from the \$6.9 billion in 1991. Current-carrying wiring devices accounted for \$4.1 billion, an increase of 4 percent from the \$3.9 billion in 1991, while the noncurrent-carrying wiring devices accounted for \$3.1 billion, an increase of 6

percent from the \$2.9 billion in 1991. The 1992 shipments included lamp holders, valued at \$204.5 million, down 5 percent from the \$214.7 million in 1991; convenience and power outlets, valued at \$330.8 million, up 7 percent from the \$308.6 million in 1991; switches, valued at \$1.4 billion, up 6 percent from the \$1.3 billion in 1991; metal contacts, valued at \$290.5 million, down 13 percent from the \$332.3 million in 1991; wire connectors, valued at \$999.8 million, up 9 percent from the \$915.8 million in 1991; other current carrying wiring devices valued at \$891.1 million, up 4 percent from the \$857.6 million in 1991; pole line and transmission hardware, valued at \$515.5 million, up 4 percent from the \$493.6 million in 1991; electrical conduit and conduit fittings, valued at \$1.5 billion, in 1992 and 1991 and other noncurrent-carrying wiring devices, valued at \$1.0 billion, up 11 percent from the \$940.1 million in 1991.

EXPLANATION OF TERMS

Products Covered. The instruction manual for this survey, which is available on request, provides representative illustrations of products included in most product code classifications.

Table 14. **VALUE OF SHIPMENTS OF WIRING DEVICES AND SUPPLIES, BY CLASS OF PRODUCT: 1983 TO 1992**

[Millions of current dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
3643	Current-carrying wiring devices.....	4,104.3	3,939.3	3,857.8	4,031.4	3,921.9	3,663.6	3,320.5	3,433.0	3,399.2	2,930.9
36431	Lamp holders.....	204.5	214.7	230.0	240.3	226.6	218.4	202.0	195.0	184.8	172.3
36432	Convenience and power outlets, both general- and special-purpose, excluding pin and sleeve type.....	330.8	308.6	287.0	301.2	304.3	290.6	278.8	270.8	254.5	212.1
36433	Switches for electrical circuitry.....	1,387.7	1,310.4	1,348.6	1,376.6	1,524.6	1,425.2	1,254.5	1,265.0	1,274.0	1,054.4
36434	Metal contacts precious and other.....	290.5	332.3	317.4	375.4	201.8	176.6	159.8	201.6	208.5	193.8
36435	Wire connectors for electrical circuitry.....	999.8	915.8	844.3	857.2	842.0	794.6	720.9	778.7	764.0	664.9
36436	Other current-carrying wiring devices, including attachment plug caps, connector bodies, lightning arrestors, and pin and sleeve convenience power outlets.....	891.1	857.6	830.4	884.2	822.6	758.2	704.6	721.9	713.4	633.4
3644	Noncurrent-carrying wiring devices.....	3,104.6	2,930.3	3,095.8	3,114.7	3,212.1	2,791.1	2,434.1	2,459.5	2,355.4	1,931.1
36441	Pole line and transmission hardware.....	515.5	493.6	516.5	525.5	455.3	384.6	375.2	380.5	370.3	351.3
36442	Electrical conduit and conduit fittings.....	1,547.6	1,496.5	1,657.7	1,664.7	1,833.9	1,528.6	1,265.9	1,275.7	1,223.3	915.1
36443	Other noncurrent-carrying wiring devices and supplies.....	1,041.6	940.1	921.6	924.5	923.0	877.9	793.0	803.2	761.9	664.7

Table 15. QUANTITY AND VALUE OF SHIPMENTS OF WIRING DEVICES AND SUPPLIES: 1992 AND 1991

[Quantity in 1,000 units; value in \$1,000]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3643	Wiring devices and supplies	(X)	(X)	7,208,961	(X)	6,869,607
	Current-carrying wiring devices.....	(X)	(X)	4,104,348	(X)	3,939,318
36431 —	Lampholders.....	30	713,188	204,452	753,233	214,686
36431 01	Incandescent:					
	Nonmetallic outer shell, threaded, medium base only, keyless, push through and pull types, excluding outlet box type and socket interiors	6	(D)	(D)	(D)	(D)
36431 02	Metal outer shell, threaded, medium base only, key, keyless, push through and pull types, excluding outlet box type and socket interiors	3	(D)	(D)	29,561	17,510
36431 03	Outlet box, threaded, medium base only, pull and keyless types	7	31,818	22,922	31,426	22,268
36431 06	Weatherproof, threaded, medium base only	7	4,064	4,126	5,179	4,646
36431 11	Candelabra base, all types	10	65,781	10,622	86,002	10,529
36431 12	Mogul base, all types	5	(D)	(D)	(D)	(D)
36431 13	Sign and fixture, medium base only	5	56,688	33,763	61,416	35,733
36431 14	All other incandescent, medium, admedium, intermediate, lumiline, miniature, including but not limited to pin-type, cleat, hasp, and socket interiors sold separately, all bases.	11	100,011	30,199	111,636	38,763
	Fluorescent:					
36431 15	Bi-pin	7	201,267	25,255	191,701	23,827
36431 21	Slimline	5	22,096	6,791	20,409	6,501
36431 23	Recessed double contact	5	11,252	8,067	10,405	7,377
36431 25	All other fluorescent, including but not limited to circline, panelescent and starter holders	6	40,700	6,011	40,636	5,120
36431 28	All other lampholders, including cold cathode neon, and bases for quartz lamps.....	8	6,569	6,302	7,066	6,464
36432 —	Convenience and power outlets, both general and special purpose, excluding pin and sleeve type.....	15	219,480	330,813	209,909	308,591
36432 27	Receptacles with GFIC (all types, all amperages).....	5	14,337	102,955	12,371	90,234
36432 28	2-pole, 2-wire (flush, all types)	8	(D)	(D)	(D)	(D)
	2-pole, 3-wire and up (flush):					
36432 29	Locking, 15 A and under	6	550	3,872	482	3,401
36432 30	Locking, 20 A and over	6	1,807	18,047	1,650	16,830
36432 31	Nonlocking, 15 A and under	7	158,145	86,684	153,155	83,577
36432 32	Nonlocking, 20 A and over	8	20,911	51,025	19,396	47,696
36432 34	Appliance and special applications all amperages, all types	4	10,485	3,792	10,799	3,742
36432 35	Dust and explosion proof.....	3	(D)	(D)	(D)	(D)
36432 37	All other types, including surface outlets ...	8	8,113	47,423	7,428	45,423
36433 —	Switches for electrical circuitry.....	80	891,608	1,387,721	890,931	1,310,396
	General use flush-mounted switches, designed for mounting in switch or outlet boxes (except dimmers):					
	ac (except mercury):					
36433 60	Single pole, 15 A and under	9	72,064	49,357	66,657	44,801
36433 63	Single pole, over 15 A	6	5,388	15,173	5,046	14,291
36433 64	Other than single pole, including but not limited to double pole 3-way, 4-way	8	36,889	55,698	32,415	46,137
	ac-dc (except mercury):					
36433 65	Single pole, all amperages	5	2,020	2,286	2,044	2,690
36433 66	Other than single pole, including but not limited to double pole 3-way, 4-way, AND	5				
36433 67	Mercury AND	4				

See footnotes at end of table.

Table 15. QUANTITY AND VALUE OF SHIPMENTS OF WIRING DEVICES AND SUPPLIES: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in \$1,000]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3643	Wire devices and supplies—Cont.					
36433 —	Current-carrying wiring devices—Cont.					
	Switches for electrical circuitry—Cont.					
	General use flush-mounted switches, designed for mounting in switch or outlet boxes (except dimmers)—Cont.					
36433 68	All other general-use switches, including but not limited to surface-mounted	10	18,014	18,000	15,280	16,547
	Special-purpose switches:					
36433 70	Appliance and fixture, including pendant and canopy types and variable speed controls	22	108,424	169,707	100,566	149,608
36433 71	Precision (1/8-inch gap or less) snap-acting switches, excluding limit switches	9	97,493	70,958	106,134	79,322
36433 72	Aircraft types	9	2,589	82,033	3,221	95,288
36433 76	Automotive types	30	343,305	614,099	357,164	583,755
36433 77	All other special-purpose switches, including foot actuated, light sensing and signal actuated	22	192,186	196,900	190,063	178,570
	Dimmers:					
	Incandescent:					
36433 93	Infinitely variable, 600 watts or less . . .	11	9,139	51,643	8,264	44,448
36433 94	Infinitely variable, over 600 watts	11	411	25,472	614	23,125
36433 95	All other types, including but not limited to portable lamps and high-low switches	10	3,686	36,395	3,463	31,814
36434 —	Metal contacts, precious and other	16	23,259	290,471	29,923	332,304
36435 —	Wire connectors, including connectors used under national electrical application	63	23,487	999,755	23,105	915,758
36435 82	Pressure connectors, where pressure is applied by screw, cone, or other mechanical device	24	225	129,514	218	127,565
36435 83	Compression connectors, uninsulated terminals and splicers, tool installed	24	1,870	132,160	2,590	123,788
36435 84	Preinsulated terminals and splicers, tool installed	15	1,502	162,089	1,425	149,481
36435 86	Banded or strip terminals and splicers, machine installed	15	6,388	114,267	6,297	106,007
36435 87	Pigtail connectors, including wire nuts	15	2,349	62,571	2,135	57,315
36435 88	Blade or pin type, separable terminations and splicers	11	4,923	109,127	5,316	101,637
36435 89	Other wire connectors n.e.c., including solder type	27	6,231	290,027	5,123	249,965
36436 —	Other current-carrying wiring devices, including attachment plug caps, connector bodies, lightning arresters, pin and sleeve convenience power outlets, etc.	101	(X)	891,136	(X)	857,583
	Attachment plug caps and flanged outlets, including motor bases, all types; including fused, fuseless, switch, and switchless:					
36436 40	2-pole, 2-wire, all types, general use locking and nonlocking, all amperages. .	15	44,710	15,906	58,435	14,655
	2-pole, 3-wire and up:					
36436 41	Locking, 15 A and under	9	2,607	9,652	2,504	9,038
36436 42	Locking, 20 A and over	8	2,607	24,518	2,435	24,261
36436 43	Nonlocking, 15 A and under	13	23,332	40,742	22,492	38,947
36436 44	Nonlocking, 20 A and over	12	11,907	25,231	9,306	19,865
36436 46	Appliance and special application types AND	9				
36436 47	Dust and explosion (except pin and sleeve) AND	2				
36436 48	All other types except pin and sleeve. . . .	2	3,839	30,072	3,827	26,658

See footnotes at end of table.

Table 15. QUANTITY AND VALUE OF SHIPMENTS OF WIRING DEVICES AND SUPPLIES: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in \$1,000]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3643	Wire devices and supplies—Cont.					
36436 —	Current-carrying wiring devices—Cont.					
	Other current-carrying wiring devices, including attachment plug cups, connector bodies, lighting arresters, pin and sleeve convenience power outlets, etc.—Cont.					
	Connector bodies and flanged outlets, all types:					
36436 49	2-pole, 2-wire, all types, all amperages ..	11	6,604	2,584	7,413	2,736
	2-pole, 3-wire and up:					
36436 51	Locking, 15 A and under	9	1,480	6,891	1,291	6,174
36436 53	Locking, 20 A and over	8	1,287	19,628	1,218	19,606
36436 55	Nonlocking, 15 A and under	12	5,487	24,452	5,180	23,517
36436 57	Nonlocking, 20 A and over	9	969	3,131	794	2,827
36436 59	Appliance and special application types, all amperages AND	8				
36436 61	Dust and explosion proof (except pin and sleeve) AND	-				
36436 63	All other types, excluding pin and sleeve. Pin and sleeve convenience and power outlets, attachment plug caps, and connector bodies:	2	38,079	42,223	36,889	40,487
	Pin and sleeve, general-purpose (120 volts and over; 20 A and over):					
36436 65	Convenience and power outlets	10	719	26,892	579	26,981
36436 67	Attachment plug caps	9	376	24,650	394	24,940
36436 69	Connector bodies	8	384	20,292	360	18,765
	Pin and sleeve, dust and explosion-proof (120 volts and over, 20 A and over):					
36436 71	Convenience and power outlets AND	3				
36436 73	Attachment plug caps AND	2				
36436 75	Connector bodies AND	2				
36436 77	Pin and sleeve, less than 120 volts, less than 20 A, all types (except electronic)	3	356	10,533	435	11,628
36436 79	Fluorescent starters	5	9,349	2,778	9,324	2,596
36436 81	Terminal blocks	20	90,375	77,174	80,185	75,988
36436 83	Lightning arresters for alternating current power transmission systems and substations; U.S. designation, station and intermediate, I.E.C. designation 10 kA and 5 kA Series A	7	(X)	31,061	(X)	56,746
36436 85	Lightning arresters for alternating current power distribution systems and substations; U.S. designation, distribution and secondary I.E.C. designation 5 kA Series B, 2.5 kA and 1.5 kA	7	(X)	98,783	(X)	86,074
36436 87	Choke coils and all other protective devices AND	4				
36436 89	Rail bonds for both propulsion and signal circuits AND	3				
36436 91	Lightning rods AND	10				
36436 92	Overhead trolley line material (except pole and transmission line construction materials and expansion plugs for roof bolting in mines)	3	(X)	41,922	(X)	38,934
36436 94	Electric harnesses and assemblies, excluding engine harnesses (from purchased wire)	9	(X)	49,174	(X)	45,259
36436 98	All other wiring devices with integral ground fault circuit interrupting capabilities, excluding circuit breakers	6	17,300	10,651	14,618	7,850
36436 99	Miscellaneous, including but not limited to combination devices, adaptors, current taps, surface extensions, and rosettes	40	(X)	252,196	(X)	233,051

See footnotes at end of table.

Table 15. QUANTITY AND VALUE OF SHIPMENTS OF WIRING DEVICES AND SUPPLIES: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in \$1,000]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3644 —	Wiring devices and supplies—Cont.					
36441 —	Noncurrent-carrying wiring devices	(X)	(X)	3,104,613	(X)	2,930,289
36441 12	Pole and transmission line hardware	36	(X)	515,508	(X)	493,621
	Pole and transmission line construction materials, also known as overhead and underground line hardware for electric transmission, distribution, and communication lines	28	(X)	424,940	(X)	395,661
36441 13	Pole and transmission line anchors	6	(X)	15,336	(X)	16,264
36441 14	Pole and transmission line construction materials, manufactured to specification, where such materials are not otherwise commercially available	5	(X)	(D)	(X)	(D)
36441 51	Suspension hardware for high voltage insulators, including clamps and fittings, strain yokes, and fittings	5	(X)	(D)	(X)	(D)
36442 —	Electrical conduit and conduit fittings	83	(X)	1,547,552	(X)	1,496,545
	Rigid conduit, excluding couplings, nipples, bends, and elbows:					
	Steel (short tons):					
36442 21	Standard weights (short tons)	8	^a 238,832	^a 214,043	230,214	206,375
36442 22	Intermediate (short tons) AND	3				
36442 25	Aluminum (short tons) AND	3				
36442 26	Other metal conduit (short tons)	-	115,487	46,563	90,951	46,107
36442 24	Nonmetallic conduit (1,000 pounds)	8	525,945	221,331	^f 539,278	^f 227,675
36442 27	Electrical metallic tubing (short tons)	6	327,957	244,613	310,066	223,937
36442 33	Flexible steel and aluminum conduit (1,000 feet)	8	144,219	48,324	207,089	53,518
36442 32	Flexible nonmetallic conduit (1,000 pounds)	12	73,625	43,508	^f 71,818	49,659
	Raceways and wire ways, including fittings, metal	(X)	(X)	254,263	(X)	241,794
36442 34	Surface	15	(X)	95,372	(X)	^f 86,945
36442 37	Underfloor AND	2				
36442 38	Ventilated cable tray and accessories ...	4	(X)	56,883	(X)	60,789
36442 51	Cast conduit bodies, covers, and gaskets ..	11	(X)	102,008	(X)	94,060
	Rigid conduit fittings, including couplings, nipples, bends, and elbows	(X)	(X)	184,883	(X)	179,021
36442 53	Couplings, connectors, and unions	19	(X)	115,918	(X)	110,241
36442 54	Locknuts and bushings	9	(X)	22,310	(X)	20,510
36442 59	All other rigid conduit fittings AND	7				
36442 52	Nonmetallic conduit fittings	12	(X)	46,655	(X)	48,270
36442 56	EMT fittings (couplings and connectors) ...	(X)	(X)	83,932	(X)	76,368
36442 57	Gland type	15	(X)	36,116	(X)	31,416
36442 57	Set-screw type	12	(X)	33,103	(X)	31,873
36442 58	All others	9	(X)	^a 2,263	(X)	^a 2,340
36442 44	Service entrance caps, ells, and connectors	13	(X)	12,450	(X)	10,739
36442 71	Cable, cord, and flexible conduit fittings. ...	(X)	(X)	169,802	(X)	156,351
	Armored cable, metallic sheathed cable, and flexible conduit fitting	14	(X)	64,655	(X)	61,748
36442 77	Liquid-tight flexible conduit fittings	12	(X)	62,837	(X)	56,942
36442 72	Nonmetallic sheathed cable and cord fittings	16	(X)	42,310	(X)	37,661
36442 46	Other electric conduit fittings	20	(X)	36,290	(X)	35,740
36443 —	Other noncurrent-carrying wiring devices and supplies	80	(X)	1,041,553	(X)	940,143
	Stamped metal boxes, covers, and accessories, including stamped conduit boxes	(X)	(X)	468,000	(X)	395,572
36443 31	Switch and receptacle boxes	14	(X)	274,145	(X)	245,564
36443 32	Outlet boxes	12	(X)	104,673	(X)	80,264
36443 33	Covers	14	(X)	57,397	(X)	45,664
36443 34	Supports, bar hangers, and other accessories	15	(X)	31,785	(X)	24,080

See footnotes at end of table.

Table 15. **QUANTITY AND VALUE OF SHIPMENTS OF WIRING DEVICES AND SUPPLIES: 1992 AND 1991—Continued**

[Quantity in 1,000 units; value in \$1,000]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3644 —	Wiring devices and supplies—Cont.					
36433—	Noncurrent-carrying wiring devices—Cont.					
	Other noncurrent—carrying wiring devices—Cont.					
	Cast metal boxes, covers, gaskets, and accessories.....	(X)	(X)	138,355	(X)	134,048
36443 41	FS and FD switch and receptacle type...	12	(X)	30,580	(X)	30,667
36443 42	Outlet type	7	(X)	35,689	(X)	34,540
36443 43	Junction type	19	(X)	72,086	(X)	68,841
	Switch, outlet, FM/TV, and telephone wall plates.....	(X)	(X)	184,253	(X)	163,285
36443 35	Metallic	8		26,970	41,694	25,466
36443 36	Nonmetallic.....	10	358,985	80,468	328,653	70,984
36443 37	Plastic boxes and covers.....	16	(X)	76,815	(X)	66,835
	Floor boxes and covers.....	(X)	(X)	250,945	(X)	247,238
36443 39	Metallic AND	8				
36443 40	Non-metallic.....	4	(X)	36,125	(X)	30,979
36443 48	Other noncurrent carrying wiring devices and supplies.....	36	(X)	214,820	(X)	216,259

Note: The percent of estimation of each item is indicated as follows: ^a10 to 25 percent of this item is estimated. ^b25 to 50 percent of this item is estimated. ^cOver 50 percent of this item is estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. n.e.c. Not elsewhere classified. ^fRevised by 5 percent or more from previously published figures. (X) Not applicable.

¹Quantities for product codes beginning with 36434 and 36435 are published in millions of units rather than thousands of units.

Table 16. **VALUE OF SHIPMENTS, EXPORTS, AND IMPORTS OF SELECTED WIRING DEVICES: 1992 AND 1991**

[Millions of dollars]

Product description	Manufacturers' shipments f.o.b. plant ¹	Exports of domestic merchandise ¹		Percent exports to manufacturers' shipments	Imports for consumption ^{1 4}	Apparent consumption ⁵	Percent imports to apparent consumption
		At port ²	Estimated producers' value ³				
1992							
Lampholders.....	204.5	10.4	8.9	5	62.7	256.8	24
Metal contacts	290.5	22.7	19.3	8	22.7	290.5	8
1991							
Lampholders.....	214.7	6.9	5.9	3	53.2	261.0	20
Metal contacts	332.3	24.5	20.9	7	18.6	326.4	6

¹For comparison of SIC codes with Schedule B export numbers and HTSUSA import numbers, see appendix B.

²Source: Bureau of the Census report EM 545, *U.S. Exports*.

³These values were derived by use of adjustment factors to exclude freight, insurance, and other charges incurred in moving goods to the port of export. This adjustment is made to convert the values to an approximation of the producers' value of exported goods. Current adjustment factors are based on data for 1989 which are published in *Exports from Manufacturing Establishments*, AR89-1, appendix B. The adjustment factor for this report is 0.8512.

⁴Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.

⁵Apparent consumption is derived by subtracting "Exports" from the sum of "Manufacturers' shipments" and "Imports."

HISTORICAL NOTE

Data on wiring devices and supplies have been collected by the Bureau of the Census since 1960. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Jack Matthews, 301-763-1513.

7.6 ELECTRIC LIGHTING FIXTURES

INTRODUCTION

These data cover companies engaged in the manufacture of specified types of electric lighting fixtures, except very small firms (generally less than 10 employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies.

The statistics were collected by mail on Bureau of the Census annual Form MA36L, Electric Lighting Fixtures. The survey panel includes all known producers of the specified types of electric lighting fixtures, except the very small firms excluded from the scope of the survey. Approximately 400 companies are included. No estimate is derived for the small firms excluded from the survey.

3-percent increase from the 1991 total value of \$4,426.0 million. The 1992 figure includes residential type fixtures, \$787.8 million, an increase of 4 percent from 1991; commercial and institutional type fixtures, \$2,206.3 million, an increase of 2 percent from 1991; industrial type fixtures, \$453.3 million, an increase of 2 percent from 1991; and outdoor lighting equipment, \$1,111.7 million, an increase of 5 percent from 1991. Vehicular lighting equipment data were discontinued in 1992.

EXPLANATION OF TERMS

See Introduction for an explanation of terms.

SUMMARY OF FINDINGS

During 1992, the total value of shipments of electric lighting fixtures was \$4,559.1 million. This represents a

Table 17. VALUE OF SHIPMENTS OF ELECTRIC FIXTURES: 1982 TO 1992

[Millions of dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982
36451	Electric lighting fixtures ¹	4,559.1	4,426.0	4,798.2	4,738.0	4,571.8	4,417.8	4,102.8	3,913.8	3,645.3	3,170.6	2,757.8
36462	Residential type	787.8	760.9	827.6	858.5	877.1	916.1	844.9	786.8	772.0	640.9	463.9
36463	Commercial and institu- tional type (except spot- light)	2,206.3	2,164.8	2,379.7	2,316.7	2,242.7	2,094.8	1,940.2	1,832.3	1,685.0	1,453.8	1,253.9
36470	Industrial type	453.3	446.4	529.4	504.6	430.6	419.1	400.9	389.2	358.0	328.7	366.9
36485	Vehicular lighting equipment	(NA)	1,616.1	1,620.7	1,570.5	1,564.4	1,368.5	1,222.4	1,001.2	925.5	779.4	654.7
	Outdoor lighting equipment	1,111.7	1,053.9	1,061.5	1,058.2	1,021.4	987.8	916.8	905.5	830.3	747.2	673.1

(NA) Not available.

¹Excludes product code 36470, "Vehicular lighting equipment," which is not available for 1992.

Table 18. QUANTITY AND VALUE OF SHIPMENTS OF ELECTRIC LIGHTING FIXTURES: 1992 AND 1991

[Quantity in 1,000 units, value in \$1,000]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36451 —	Electric lighting fixtures, residential type	117	(X)	787,765	(X)	760,856
	Incandescent, excluding PAR lampholders and floodlights:					
	Interior, including bath or kitchen:					
36451 11	Ceiling or pendant	78	18,525	302,085	17,981	320,717
36451 13	Wall or bracket	64	4,389	79,650	4,723	80,434
	Track lighting:					
36451 06	Single circuit track lengths and accessories	4	(X)	2,516	(X)	2,706
36451 07	Multiple circuit track lengths and accessories	2	(X)	(D)	(X)	(D)
36451 08	Line voltage heads AND	1				
36451 09	Low voltage heads AND	3				
36451 10	Track lengths and heads sold together (kits)	2	81	1,059	98	1,534
36451 12	Recessed IC (direct contact with ceiling insulation)	7	1,444	17,598	885	8,150
36451 14	Recessed non-IC (3-inch minimum clearance from ceiling insulation)	5	1,485	23,062	950	9,119
	Outdoor:					
36451 15	Designed for attachment to house	47	5,089	64,813	4,349	62,908
36451 16	Custom lighting (lanterns, etc.)	5	100	3,971	90	3,336
36451 17	Not designed for attachment to house (garden patio, yard)	31	5,693	56,325	5,240	53,258
	Fluorescent:					
36451 18	Wraparounds	25	4,749	74,050	8,128	77,932
36451 20	Ceiling mounted decorative	27	3,939	54,637	3,375	53,356
36451 22	Ceiling mounted general purpose	15	3,655	37,920	3,517	31,788
36451 24	Pendant	8	(D)	(D)	(D)	(D)
36451 26	Recessed IC (direct contact with ceiling insulation) AND	2				
36451 28	Recessed non-IC (3-inch minimum clearance from ceiling insulation)	8	356	9,229	331	8,145
36451 30	Wall or bracket	17	1,299	16,648	666	15,211
36451 69	Components and renewal parts for residential type sold separately	28	(X)	33,808	(X)	32,262
36462 —	Electric lighting fixtures, commercial and institutional type (except portable and spotlight)	154	(X)	2,206,326	(X)	2,164,759
	Incandescent fixtures:					
	Utilitarian and ornamental types (primarily for public buildings, banks, stores, office buildings, schools, auditoriums, churches, theaters, etc):					
36462 11	Surface or pendant	50	1,062	68,108	1,193	68,968
	Recessed:					
36462 12	IC (direct contact with ceiling insulation)	17	10,151	108,783	9,800	101,356
36462 14	Non-IC (3-inch minimum clearance from ceiling insulation)	17	15,776	216,262	15,960	227,418
	Track lighting:					
36462 20	Single circuit track lengths and accessories	7	(X)	22,042	(X)	20,187
36462 22	Multiple circuit track lengths and accessories	8	(X)	7,345	(X)	9,352
36462 24	Line voltage heads	8	1,530	34,163	1,605	35,198
36462 26	Low voltage heads	8	535	12,188	507	11,507
36462 28	Track lengths and heads sold together (kits)	5	229	4,935	239	4,631
36462 18	Specialized custom lighting fixtures, chandeliers, church lighting, etc.	36	(X)	43	(X)	44
36462 19	Other incandescent fixtures, such as interior display and PAR lampholders	26	(X)	98	(X)	85
	High intensity discharge types:					
36462 30	Surface or pendant	22	129	17,807	132	18,376
36462 31	Indirect lighting	9	47	7,195	43	6,365
	Recessed non-IC (3-inch minimum clearance from ceiling insulation):					
36462 36	Open reflector	17	1,115	41,465	952	37,584
36462 38	Enclosed	18	194	18,268	188	16,995
	Recessed IC (direct contact with ceiling insulation):					
36462 39	Open reflector AND	5				
36462 41	Enclosed	8	323	15,329	281	13,791

See footnotes at end of table.

Table 18. QUANTITY AND VALUE OF SHIPMENTS OF ELECTRIC LIGHTING FIXTURES: 1992 AND 1991—Continued

[Quantity in 1,000 units, value in \$1,000]

Product code	Product description	Number of companies	1992		1991'	
			Quantity	Value	Quantity	Value
36462 —	Electric lighting fixtures, commercial and institutional type (except portable and spotlight)—Cont.					
	Fluorescent:					
	Recessed troffers, air handling, including heat extraction versions:					
36462 43	Lensed	14	398	21,524	419	23,350
36462 44	Metal louvered	14	3,751	203,927	3,884	216,431
36462 45	Non-metal louvered	9	57	4,797	58	5,114
	Recessed troffers, non-air handling, including heat extraction versions:					
36462 46	Lensed	37	9,891	352,318	9,913	348,248
36462 47	Metal louvered	25	1,287	74,510	1,183	66,817
36462 48	Non-metal louvered	11	165	8,479	178	9,132
36462 49	Striplights (surface)	46	12,136	217,775	10,155	196,853
36462 50	Striplights (recessed)	12	391	14,887	358	10,337
36462 55	Ceiling systems, including luminous ceilings	18	(X)	17,396	(X)	16,274
36462 56	Plastic wraparounds	41	4,679	138,546	4,946	138,466
36462 57	Wall mounted fixtures	56	1,363	73,162	1,076	55,289
36462 65	Under cabinet mount task light	20	979	20,568	757	16,958
	Surface and pendant, all other:					
36462 66	Lensed	46	2,232	78,405	2,292	81,997
36462 68	Louvered	20	218	23,726	224	23,077
	Compact fluorescent downlights:					
36462 70	Recessed IC (direct contact with ceiling insulation)	6	151	9,231	122	7,619
36462 72	Recessed non-IC (3-inch minimum clearance from ceiling insulation)	10	1,335	55,157	1,130	51,995
	Specific function lighting, all sources (incandescent, HID and fluorescent):					
36462 59	Enclosed and gasketed (clean room fixtures)	35	439	29,109	440	28,230
36462 74	Indirect lighting, furniture mount AND	2				
36462 76	Indirect lighting, pendant mount	3	14	1,371	14	1,294
36462 61	Indoor signs, including electro-luminescence exit, directional, etc.	26	1,608	101,911	1,626	113,473
36462 62	Indoor emergency lighting (automatic self-powered) .	18	609	40,136	619	47,059
36462 63	Vandal resistant (specialty products designed for this application)	9	46	2,254	51	2,741
36462 64	All other	39	(X)	86,700	(X)	90,160
36462 69	Components and renewal parts for commercial and institutional type sold separately	42	(X)	56,406	(X)	41,988
36463 —	Electric lighting fixtures, industrial type	61	(X)	453,270	(X)	446,358
	General lighting (except portable):					
36463 11	Incandescent	14	526	12,977	492	12,280
36463 13	Fluorescent	34	3,279	114,602	3,090	107,494
	High intensity discharge types, including integrally mounted and remote ballasts:					
36463 06	Open reflector	14	685	70,431	642	64,636
36463 08	Enclosed	16	791	105,869	679	102,131
36463 10	Parking garage lighting (fixtures designed specifically for this application)	10	92	9,829	114	12,724
	Hazardous lighting - UL listed, class, division, group:					
36463 16	Incandescent, including portable	10	(X)	18,318	(X)	22,160
36463 17	Fluorescent, including portable	18	(X)	22,696	(X)	30,611
36463 19	High intensity discharge types, including integrally mounted and remote ballasts	12	(X)	65,026	(X)	65,195
36463 29	Components and renewal parts for industrial type sold separately	19	(X)	33,522	(X)	29,127
36485 —	Outdoor lighting equipment, excluding lamps	96	(X)	1,111,711	(X)	1,053,920
	Street and highway lighting luminaires, including bridge and tunnel lighting:					
36485 11	Incandescent (filament and quartz iodine)	2	(D)	(D)	(D)	(D)
	High intensity discharge types, including low pressure sodium and integrally mounted and remote ballasts:					
36485 13	Open	5	475	18,302	428	16,641
36485 14	Enclosed	18	1,179	93,185	1,132	87,877
36485 15	Fluorescent	8	25	4,619	30	5,540
36485 17	Special purpose luminaires for highmast, sign lighting and expressway fixtures, excluding value of poles	5	129	21,980	95	16,795

See footnotes at end of table.

Table 18. **QUANTITY AND VALUE OF SHIPMENTS OF ELECTRIC LIGHTING FIXTURES: 1992 AND 1991—Continued**

[Quantity in 1,000 units, value in \$1,000]

Product code	Product description	Number of companies	1992		1991 ¹	
			Quantity	Value	Quantity	Value
	Outdoor lighting equipment, excluding lamps—Cont.					
	Floodlighting, area, and site lighting luminaries:					
	General purpose floodlighting:					
36485 20	Incandescent filament.	6	82	8,913	88	9,702
36485 22	Incandescent quartz iodine.	14	1,645	24,895	1,249	22,342
36485 23	High intensity discharge types, general, including low pressure sodium and integrally mounted and remote ballasts.	25	899	137,898	981	144,432
36485 26	Fluorescent.	9	204	11,187	200	11,166
36485 27	HID sports lighting (fixtures designed specifically for this application).	9	129	20,414	92	14,194
	HID area and site lighting:					
36485 35	Site lighting (under 20-foot mounting).	24	1,168	88,980	1,097	85,548
36485 39	Bollards.	15	30	8,852	22	6,430
36485 40	Post-top.	13	120	22,516	100	17,472
36485 42	Large area lighting (20- to 60-foot mounting).	18	416	94,852	374	81,287
36485 32	Wall packs (such as high intensity discharge, incandescent, and quartz).	17	792	75,680	713	65,403
36485 34	Outdoor PAR lampholders.	10	2,904	54,338	3,138	52,778
	Other floodlighting and area lighting equipment:					
36485 43	Spotlights, including indoor and stage and excluding vehicular.	8	274	29,817	222	24,221
36485 45	All other outdoor lighting equipment (such as underwater fountain and pool lighting).	24	(X)	61,963	(X)	65,306
	Aviation ground lighting equipment (for fixed-based airports):					
36485 31	Runway approach lighting, including fixtures, regulators, insulating transformers, isolating lamp transformers, beacons, wind tees, and cones.	5	(X)	12,382	(X)	11,468
36485 33	Runway (except runway approach, taxiway, and ramp light), including fixtures, regulators, and isolating lamp transformers.	6	(X)	(D)	(X)	(D)
36485 98	Components and renewal parts for outdoor lighting equipment sold separately.	31	(X)	50,479	(X)	48,630
	Poles, standards, newels, brackets, and accessories:					
	For street and highway lighting, including traffic signal standards:					
36485 36	Steel and cast iron poles.	17	(X)	63,865	(X)	63,752
36485 38	Aluminum poles AND	11				
36485 40	Concrete poles AND	4				
36485 37	All other, including fiberglass, wood, etc.	4	(X)	43,449	(X)	44,927
	For area lighting, sports and other off-street use:					
36485 46	Steel and cast iron poles (60-foot and over).	6	(X)	14,431	(X)	15,491
36485 47	Steel and cast iron poles (under 60-foot).	20	(X)	50,755	(X)	47,936
36485 48	Aluminum poles.	22	(X)	47,716	(X)	42,995
36485 49	All other, including concrete, wood, etc.	9	(X)	12,240	(X)	9,553

(D) Data withheld to avoid disclosing figures for individual companies.

¹Revised 1991 data to the new product code changes created in 1992.

(X) Not applicable.

Table 19. SHIPMENTS, EXPORTS, AND IMPORTS OF ELECTRIC LIGHTING FIXTURES: 1992

[Quantity in units, value in \$1,000]

Product code ¹	Product description	Manufacturers' shipments f.o.b. plant (value)	Exports of domestic merchandise ¹		Imports for consumption ³	
			Quantity	Value at port ²	Quantity	Value in foreign country
36451 06-18, 20, 22, 24, 26, 28, 30	Electric lighting fixtures, residential type (except portable), excluding components and renewal parts	753,957	372,647	25,509	34,537,752	348,237
36462 11-12, 14, 18-20, 22, 24, 26, 28, 30-31, 36, 38, 39, 41, 43-50, 55-57, 59, 61-66, 68, 70, 72, 74, 76, 36463 06, 08, 10-11, 13, 16-17, 19	Electric lighting fixtures, commercial, institutional and industrial types, excluding components and renewal parts	2,569,668	847,141	71,524	9,466,518	84,263
36485 11, 13-15, 17, 20, 22-23, 26-27, 31-35, 39-40, 42-43, 45	Outdoor lighting equipment (except lamps), excluding components and renewal parts	1,061,232	6,782,421	143,523	58,051,212	239,642
36451 69, 36462 69, 36463 29, 36485 96	Components and renewal parts for lighting fixtures	174,215	(NA)	122,470	(NA)	157,700

(NA) Not available.

¹For comparison of SIC-based product codes with Schedule B export numbers and HTSUSA import numbers, see appendix B.²Source: Bureau of the Census report EM 545, *U.S. Exports*.³Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.

HISTORICAL NOTE

Data on electric lighting fixtures have been collected by the Bureau of the Census since 1962. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact the Bureau of the Census, Data User Services Division, 301-763-4100.

FUNDING

The MA36L survey is funded by the National Electric Manufacturers Association.

CONTACT FOR DATA USERS

For additional information about these data, contact Louise Beckett, 301-763-4085 or Jack Matthews, 301-763-1513.

7.7 COMMUNICATION EQUIPMENT

INTRODUCTION

These data cover all significant manufacturers of communication equipment, including telephone, telegraph, and other electronic systems. The mailing panel included all establishments with 20 employees or more for industries 3661, 3663, 3669, and 3699.

The statistics were collected by mail on Bureau of the Census annual Form MA36P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment. The survey panel includes all known manufacturers of telephone and telegraph apparatus, communications systems and equipment, and electronic equipment, except the firms excluded from the scope of the survey. Approximately 6,025 companies are included. No estimate is derived for the small firms excluded from the survey.

SUMMARY OF FINDINGS

During 1992, shipments of communication equipment totaled \$40.0 billion, an increase of 6 percent from the 1991 figure of \$37.8 billion. Telephone switching and switchboard equipment totaled \$7.3 billion, an increase of 5 percent from the 1991 figure of \$7.0 billion. Carrier line equipment and modems totaled \$5.1 billion, an increase of 17 percent from the 1991 figure of \$4.3 billion. Other telephone and telegraph equipment in 1992 increased 15 percent to \$5.7 billion, from the 1991 figure of \$4.9 billion.

Communication systems and equipment totaled \$15.4 billion, an increase of 3 percent over the 1991 figure of \$15.0 billion.

Broadcast, studio and related electronic equipment totaled \$2.0 billion, an increase of 7 percent from the 1991 figure of \$1.8 billion.

Intercommunication systems totaled \$271.6 million, a decrease of 11 percent from the 1991 figure of \$303.6 million; alarm systems totaled \$1.2 billion, an increase of 4 percent from the 1991 figure of \$1.1 billion; vehicular and pedestrian traffic control equipment and electrical railway signals and attachments totaled \$515.2 million, an increase of 5 percent from the 1991 figure of \$491.1 million.

Electronic teaching machines, teaching aids, trainers and simulators totaled \$1.3 billion, a decrease of 7 percent from the 1991 figure of \$1.4 billion; laser systems and equipment, except medical and communication, totaled \$588.1 million, a decrease of 9 percent from the 1991 figure of \$646.9 million; ultrasonic equipment totaled \$113.5 million and remained unchanged from 1991; and other electronic systems and equipment totaled \$686.0 million, a decrease of 5 percent from the 1991 total of \$720.8 million.

EXPLANATION OF TERMS

Research and Development. Dollar shipments reflect income from development, design, and engineering services in connection with the manufacture of the products shipped.

Table 20. **VALUE OF SHIPMENTS OF COMMUNICATION EQUIPMENT, INCLUDING TELEPHONE, TELEGRAPH, AND OTHER ELECTRONIC SYSTEMS AND EQUIPMENT, BY CLASS OF PRODUCT: 1987 TO 1992**

[Millions of unadjusted dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987
	Communications equipment, including telephone, telegraph, and other electronic systems and equipment ..	40,044.2	37,821.0	37,974.9	36,331.3	¹ 35,702.4	34,809.1
36611	Telephone switching and switchboard equipment. ...	7,301.8	¹ 6,956.6	7,537.1	6,975.5	7,399.7	7,367.1
36613	Carrier line equipment and modems	5,050.5	4,298.4	5,013.8	4,705.7	5,589.0	5,011.6
36614	Other telephone and telegraph equipment and components	5,665.5	¹ 4,909.5	3,180.5	3,061.8	3,066.5	3,507.8
36631	Communications systems and equipment (except broadcast)	15,388.9	14,987.9	14,768.0	14,016.3	12,213.0	11,692.4
36632	Broadcast, studio, and related electronic equipment ..	1,963.5	¹ 1,836.3	1,856.4	1,809.6	1,804.2	1,608.6
36693	Intercommunications systems, including inductive paging systems (selective calling)	271.6	303.8	346.1	367.8	392.6	282.8
36691	Alarm systems	1,185.7	¹ 1,145.0	1,027.2	1,132.5	1,164.7	1,235.0
36692	Vehicular and pedestrian traffic control equipment and electrical railway signals and attachments	515.2	491.1	470.6	451.1	387.0	426.4
36991	Electronic teaching machines, teaching aids, trainers and simulators	1,313.9	1,411.0	1,208.8	1,359.6	1,243.7	1,163.1
36992	Laser systems and equipment (except medical and communications) ²	588.1	¹ 646.9	984.6	915.6	894.7	879.3
36995	Ultrasonic equipment	113.5	113.7	108.8	137.7	101.3	93.5
36999	Other electronic systems and equipment, n.e.c. ³	686.0	¹ 720.8	1,473.0	1,398.1	1,446.0	1,541.5

n.e.c. Not elsewhere classified.

¹Revised by 5 percent or more from previously published figures.

¹Product codes 38122, "Search, detection, navigation and guidance systems and equipment," and 38295, "Commercial, geophysical, meteorological, and general purpose instruments and equipment," are now collected on Current Industrial Report, MA38B, "Selected Instruments and Related Products." Therefore, the 1988 total shown for communications equipment is not comparable to 1987 and earlier years.

²Beginning in 1992, data for "Medical laser equipment" are now being collected on Current Industrial Report, MA38R, "Electromedical Equipment and Irradiation Equipment (Including X-ray)".

³Beginning with 1992, product codes 36998 pt., 39992 pt., and 39447 pt. have been dropped. Product code 36997 has been changed to product code 36999 and is not comparable to years 1987 through 1990.

Table 21. **QUANTITY AND VALUE OF SHIPMENTS OF COMMUNICATION EQUIPMENT, INCLUDING TELEPHONE, TELEGRAPH, AND OTHER ELECTRONIC SYSTEMS AND EQUIPMENT, BY CLASS OF PRODUCT: 1992 AND 1991**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of Companies	1992		1991 ¹	
			Quantity	Value	Quantity	Value
36611 —	Telephone switching and switchboard equipment	66	(X)	7,301,844	(X)	6,956,615
	Central office switching equipment:					
36611 23	Local switching	15	(X)	3,708,019	(X)	3,475,123
36611 28	Toll switching	8	(X)	519,196	(X)	467,522
	Private branch exchange switching equipment:					
36611 41	Up to 99 lines AND	8				
36611 43	100 to 399 lines	8	(X)	411,013	(X)	429,251
36611 45	400 to 1,000 lines	8	(X)	219,640	(X)	191,817
36611 49	Over 1,000 lines	8	(X)	121,088	(X)	189,063
36611 51	Cellular mobile telephone switching equipment AND	2				
36611 55	Packet switching equipment	2	(X)	202,999	(X)	191,335
36611 91	Other telephone switching and switchboard equipment	37	(X)	1,947,528	(X)	1,844,730
36611 98	Parts, components, and subassemblies for telephone switching equipment	22	(X)	172,361	(X)	167,774
36613 —	Carrier line equipment and modems	94	(X)	5,050,461	(X)	4,298,392
	Carrier line equipment:					
	Repeaters and line transceivers:					
36613 01	Analog	3	(X)	7,233	(X)	12,197
36613 05	Digital, all copper wire AND	12				
36613 09	Digital, optical input or output	4	(X)	591,943	(X)	424,151
	Multiplex equipment, including channel banks:					
36613 30	Analog	12	(X)	203,803	(X)	230,927
36613 33	Digital, all copper wire	27	(X)	834,361	(X)	809,599
36613 36	Digital, optical input or output	8	(X)	224,936	(X)	180,903
	Other subscriber loop carrier terminal and line equipment:					
36613 41	Analog	8	(X)	67,811	(X)	97,310
36613 45	Digital, all copper wire AND	11				
36613 49	Digital, optical input or output	3	(X)	649,507	(X)	557,009
	Other carrier line equipment:					
36613 51	Analog	7	(X)	66,755	(X)	56,457
	Digital:					
36613 55	Meeting or exceeding T1 standard (1.5 mbps) ..	7	(X)	60,646	(X)	48,081
36613 59	Other	16	(X)	811,628	(X)	616,590
	Modems:					
36613 61	Up through 10,000 bps	40	2,698,528	1,025,689	1,954,498	893,235
36613 65	Over 10,000 bps	22	767,236	506,149	562,959	371,933
36614 —	Other telephone and telegraph equipment and components	179	(X)	5,665,455	(X)	4,909,483
	Telephone sets:					
36614 21	Single line and ISDN sets	9	(S)	172,353	(S)	171,878
36614 25	Key sets	7	(S)	46,576	(S)	41,470
36614 29	Public pay telephone equipment	5	20,098	14,499	20,481	14,840
36614 36	Cordless handsets	-	-	-	-	-
36614 38	Other telephone sets and accessories (e.g., headsets)	9	283,538	118,207	214,921	94,947
	Other data communications equipment:					
36614 41	Routers and gateways	10	(X)	676,139	(X)	390,128
36614 43	Bridges	11	(X)	34,750	(X)	25,081
36614 45	Terminal servers AND	7				
36614 47	Concentrators	8	(X)	807,692	(X)	641,457
36614 49	Other data communications equipment (front end processors, translators, etc.)	37	(X)	886,433	(X)	755,032
36614 51	Voice frequency equipment	13	(X)	73,178	(X)	95,564
36614 55	Telephone key systems equipment	7	(X)	353,680	(X)	274,452

See footnotes at end of table.

Table 21. **QUANTITY AND VALUE OF SHIPMENTS OF COMMUNICATION EQUIPMENT, INCLUDING TELEPHONE, TELEGRAPH, AND OTHER ELECTRONIC SYSTEMS AND EQUIPMENT, BY CLASS OF PRODUCT: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of Companies	1992		1991 ^r	
			Quantity	Value	Quantity	Value
36614 59	Other telephone and telegraph equipment and components—Cont. Video teleconferencing equipment (video CODECS and other systems equipment).....	8	(X)	238,882	(X)	171,071
36614 61	Voice/call message processing equipment, including answering devices: Voice mail equipment.....	8	(X)	226,376	(X)	188,345
36614 63	Voice response equipment.....	10	(X)	208,246	(X)	225,704
36614 65	Automated attendance equipment AND	7				
36614 67	Automatic call distributors.....	6	(X)	89,373	(X)	90,924
36614 69	Other voice or call processing equipment.....	7	(X)	49,963	(X)	42,922
36614 91	Facsimile communication equipment (complete).....	11	(X)	156,378	(X)	209,867
36614 97	Other telephone/telegraph equipment.....	60	(X)	1,297,514	(X)	1,259,338
36614 99	Parts, components and subassemblies for other telephone equipment.....	24	(X)	215,216	(X)	216,463
36632 —	Broadcast, studio, and related electronic equipment Audio equipment, excluding consumer and P.A. types:	158	(X)	1,963,525	(X)	1,836,343
36632 12	Amplifiers and preamplifiers.....	25		312,773		402,077
36632 13	Control consoles and switchers.....	19		19,685		27,549
36632 17	Other (power supplies, terminal equipment, broadcast recorders, etc.).....	32	(X)	192,176	(X)	162,245
36632 22	Video equipment, excluding consumer and P.A. types: Amplifiers AND	7				
36632 24	Television cameras AND	2				
36632 25	Video tape recorders.....	3	(X)	85,369	(X)	62,974
36632 28	Other (power supplies, synchronization equipment, terminal equipment monitors, telecine chains, control consoles and switchers, film equipment, TV outside vans).....	23	(X)	388,436	(X)	409,014
36632 31	Transmitters, translators, RF power amplifiers, and related equipment: AM and FM transmitters.....	10	(X)	49,260	(X)	34,890
36632 34	TV transmitters.....	8	(X)	57,749	(X)	54,498
36632 37	Other (broadcast transmission line equipment, phasing equipment, TV boosters and repeaters (translators), etc.).....	20	(X)	178,881	(X)	132,325
36632 39	Studio transmission links (STL) and remote pickup equipment.....	6	(X)	49,559	(X)	42,596
36632 41	Cable TV (master antennae and CATV equipment), excluding construction cost: Head end equipment (antennae baluns, carrier generators, head end control units, single and broadband preamplifiers and strip amplifiers, converters, modulators and demodulators; splitting filters and traps, power supplies, switches, etc.) ...	19	(X)	103,813	(X)	118,794
36632 46	Subscriber converters AND	3				
36632 49	Subscriber equipment (decoders, switchers; wall outlet taps; distribution amplifiers; power supplies; directional couplers, splitters, alternators, and equalizers).....	6	(X)	205,096	(X)	173,109
36632 43	Broadcasting transmitting antennae and community antennae systems.....	7	(X)	30,432	(X)	24,085
36632 44	Closed circuit television systems and equipment, excluding broadcast and consumer products.....	22	(X)	228,437	(X)	214,019
36632 45	Other broadcast, studio, theater, and commercial sound equipment, sold separately, excluding studio lighting equipment, radiating and supporting towers ..	36	(X)	181,069	(X)	153,674
36632 59	Parts and accessories for broadcast, studio and related electronic equipment (sold separately).....	5	(X)	4,392	(X)	2,570

See footnotes at end of table.

Table 21. **QUANTITY AND VALUE OF SHIPMENTS OF COMMUNICATION EQUIPMENT, INCLUDING TELEPHONE, TELEGRAPH, AND OTHER ELECTRONIC SYSTEMS AND EQUIPMENT, BY CLASS OF PRODUCT: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of Companies	1992		1991 ^r	
			Quantity	Value	Quantity	Value
36693 —	Intercommunications systems, including inductive paging systems (selective calling)	41	(X)	271,620	(X)	303,846
36693 12	Wired	39	(X)	241,593	(X)	274,857
36693 13	Nonwired	6	(X)	30,027	(X)	28,989
36691 —	Alarm systems	103	(X)	1,185,685	(X)	1,144,971
	Intrusion detection:					
36691 48	Local	32	(X)	119,925	(X)	129,832
36691 49	Central station	26	(X)	283,029	(X)	271,508
36691 50	Direct connect	14	(X)	51,797	(X)	57,114
36691 51	Hold-up systems (commercial and industrial)	8	(X)	(¹)	(X)	(¹)
36691 52	Automotive	5	(X)	59,785	(X)	52,317
	Fire detection and prevention:					
	Smoke and heat detection alarms:					
36691 53	Ionization chamber type	14	(X)	107,671	(X)	142,610
36691 54	Other, including photo cell type	18	(X)	178,075	(X)	161,013
36691 56	Central station	16	(X)	68,997	(X)	54,234
36691 57	Direct connect	18	(X)	121,603	(X)	100,140
36691 59	Other intercommunication and alarm systems, including electric sirens, and horns (marine, industrial, and air raid), security locking systems ¹ ...	29	(X)	194,803	(X)	176,203
36692 —	Vehicular and pedestrian traffic control equipment, electrical railway signals and attachments	36	(X)	515,179	(X)	491,060
	Vehicular and pedestrian traffic control equipment:					
36692 42	Signal heads, including parts and accessories	11	(X)	55,319	(X)	60,340
36692 43	Electronic and electro-mechanical controllers, detectors, and sensors, including parts and accessories	22	(X)	139,076	(X)	136,336
	Railway signals and attachments, electric:					
36692 45	Railway highway grade crossing signals, excluding relays and other control apparatus AND	5				
36692 46	Other railway signal systems and safety control equipment	8	(X)	320,784	(X)	294,384
36991 —	Electronic teaching machines, teaching aids, trainers, and simulators	47	(X)	1,313,868	(X)	1,411,035
36991 81	Electronic trainers and simulators	38	(X)	1,234,877	(X)	1,354,527
36991 85	Other electronic teaching machines and teaching aids	13	(X)	78,991	(X)	56,508
36992 —	Laser systems and equipment (except medical and communications) ²	49	(X)	588,143	(X)	646,853
36992 83	Laser designator/ranging equipment AND	6				
36992 84	Laser instrumentation (laboratory alignment devices, surveying equipment, etc.)	16	(X)	326,157	(X)	355,320
36992 85	Industrial laser equipment (material processing, printing, and wirephoto)	17	(X)	162,077	(X)	189,531
	Other laser equipment:					
	Lasers, excluding semiconductor lasers:					
36992 89	Dye lasers	2	(X)	(S)	(X)	(S)
36992 92	Gas lasers	3	(X)	(S)	(X)	(S)
36992 95	Solid-state lasers	4	(X)	(S)	(X)	(S)
36992 98	Laser generators, power supplies and other laser equipment and accessories sold separately	16	(X)	72,943	(X)	79,854
36995 —	Ultrasonic equipment, n.e.c.	12	(X)	113,521	(X)	113,677

See footnotes at end of table.

Table 21. **QUANTITY AND VALUE OF SHIPMENTS OF COMMUNICATION EQUIPMENT, INCLUDING TELEPHONE, TELEGRAPH, AND OTHER ELECTRONIC SYSTEMS AND EQUIPMENT, BY CLASS OF PRODUCT: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of Companies	1992		1991 ^r	
			Quantity	Value	Quantity	Value
36999 —	Other electronic systems and equipment, n.e.c. ³	119	(X)	685,983	(X)	720,791
36999 51	Consumer electronic equipment, n.e.c.	12	(X)	49,167	(X)	54,017
36999 55	Scientific electronic equipment, n.e.c.	22	(X)	94,078	(X)	97,129
36999 61	Industrial electronic equipment, n.e.c.	14	(X)	18,345	(X)	22,156
36999 65	All other electronic equipment, n.e.c.	84	(X)	524,393	(X)	547,489
36798 —	Printed circuit assemblies (loaded boards, subassemblies, and modules):					
	Loaded computer processor boards and board subassemblies by (MLP) ⁴ 5	336	(X)	14,224,827	(X)	12,590,386
36798 31	Under \$1,000 (MLP)	19	(X)	597,860	(X)	282,721
36798 33	\$1,000 to \$4,999 (MLP)	15	(X)	404,933	(X)	270,661
36798 35	\$5,000 to \$14,999 (MLP)	11	(X)	71,381	(X)	86,068
36798 37	\$15,000 to \$49,999 (MLP) AND	6				
36798 39	\$50,000 to \$249,999 (MLP) AND	2				
36798 41	\$250,000 to \$1 million (MLP)	1	(X)	86,877	(X)	178,554
36798 43	Over \$1,000,000 (MLP)	-	-	-	-	-
36798 15	Computer processors (systems boards, array processors, etc.)	48	(X)	2,036,204	(X)	2,632,111
36798 11	Memory boards, including boards for adding memory to peripherals	83	(X)	2,311,997	(X)	2,033,389
36798 13	Peripheral controller boards (e.g., graphics boards, I/O controllers)	71	(X)	1,463,407	(X)	652,916
36798 17	Instrumentation boards (e.g., D/A converters, frequency counters)	35	(X)	2,125,802	(X)	2,033,952
36798 19	Communication boards (e.g., FAX, modems, LAN adaptors)	69	(X)	716,034	(X)	615,115
36798 21	Other board level products for use within a computer system	23	(X)	844,532	(X)	771,998
36798 22	Other boards	87	(X)	2,210,779	(X)	1,981,313
36798 29	Receipts for contract work by contract assemblers, board stuffers, and related job shops	69	(X)	1,355,021	(X)	1,051,588
50650 00	Nonmanufacturing revenues of this establishment: Supplies and accessories shipped without further manufacture, for use with communications equipment	62	(X)	314,337	(X)	(S)
99980 49	Research and development, testing and evaluation of systems and components	45	(X)	532,106	(X)	(S)
73700 00	Software sold with communications systems shipped by manufactures	30	(X)	275,955	(X)	(S)
73730 00	Systems integration revenues, including configuration installation and site preparation, and custom programming	49	(X)	151,490	(X)	(S)
73790 00	Other nonmanufacturing revenues associated with computer systems	21	(X)	150,634	(X)	(S)

Note: The percent of estimation of each item is indicated as follows: ^a10 to 25 percent of this item has been estimated. ^bOver 26 percent of this item has been estimated.

- Represents zero. n.e.c. Not elsewhere classified ^r1991 data has been revised to the new product code changes created in 1992.
(S) Data withheld does not meet publication standards. (X) Not applicable.

¹Data for product code 36691 50 are included with product code 36691 59 to avoid disclosing figures for individual companies.

²Beginning in 1992, data for "Medical laser equipment" are now published under product code 38450 41.

³Beginning in 1992, "Automatic garage door openers, electronic"; "Electronic games"; and "Home electronic games" have been dropped from the survey. Product code 36997, "Other electronics systems and equipment, n.e.c." has been changed to product code 36999 and is not comparable to previous years.

⁴MLP Manufacturer's list price.

⁵These data are collected on two Current Industrial Report forms, MA35R, "Computer and Office and Accounting Machines," and MA36Q, "Semiconductors, Printed Circuit Boards, and Other Electronic Components."

Table 22. VALUE OF SHIPMENTS OF COMMUNICATIONS SYSTEMS AND EQUIPMENT, EXCEPT BROADCAST BY CLASS OF PRODUCT: 1992 AND 1991

[Value in thousands of dollars]

Product code	Product description	No. of companies	1992					1991				
			Total shipments	Space-based (satellite)	Airborne and Marine based	Earth-based		Space-based (satellite)	Airborne and Marine based	Earth-based		Mobile/portable
						Fixed	Mobile/portable			Fixed	Mobile/portable	
36631 —	Communications systems and equipment (except broadcast)	319	15,388,860	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
	Communications systems and equipment by radio station type and station location	(NA)	9,086,836	1,435,019	256,295	3,513,085	3,882,437	1,787,358	178,092	2,930,923	3,680,472	
	Radio station type:											
36631 15	Amateur	12	(1)	-	(D)	(D)	(D)	-	(D)	(D)	(D)	(D)
36631 17	Broadcast (sound and TV)	6	(1)	(D)	-	(D)	(D)	(D)	-	(D)	(D)	(D)
36631 19	Earth exploration	2	(1)	(D)	-	-	(D)	(D)	-	-	(D)	(D)
36631 21	Meteorological ¹	1	617,000	(D)	(D)	(D)	(D)	(D)	-	(D)	(D)	(D)
36631 23	Fixed	21	^a 1,546,974	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
36631 25	Intersatellite	17	^b 2,634,200	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
36631 27	Telecommand	5	210,788	-	(D)	(D)	(D)	-	(D)	(D)	(D)	(D)
36631 29	Telemetry	16	177,793	(D)	(D)	122,777	(D)	(D)	(D)	137,232	(D)	(D)
36631 31	Radionavigational and locational	8	46,456	(D)	11,065	(D)	(D)	(D)	10,180	(D)	(D)	(D)
36631 33	Aeronautical communications	7	209,144	-	(D)	(D)	(D)	-	(D)	(D)	(D)	(D)
	Mobile:											
	Cellular system equipment (except switching, published in product code 36611):											
36631 34	Analog	6	1,257,640	-	-	(D)	(D)	-	-	(D)	(D)	(D)
36631 35	Digital	9	1,928,043	(D)	(D)	(D)	1,894,186	(D)	(D)	(D)	(D)	(D)
36631 42	Other conventional and trunked system equipment	11	249,076	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
36631 44	Other mobile	12	132,130	-	(D)	(D)	(D)	-	(D)	(D)	(D)	(D)
36631 46	Other	10	77,592	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
	Communications systems and equipment	(NA)	6,302,024	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
36631 48	Checkout, monitoring, evaluation, and other electronic support equipment for communications systems	44	342,377	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
	Antenna systems, sold separately:											
36631 53	Below 890 MHz	51	598,968	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
36631 55	890 MHz and above	43	297,026	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
	Fiber optics equipment, excluding connectors, cable, photodiode and laser diode components, microwave equipment, and multiplexors:											
36631 57	Equipment meeting SONET standards:	2	(2)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
36631 59	OC-1 equipment	4	(2)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
36631 61	OC-2 and 3 equipment	-	-	-	-	-	-	-	-	-	-	-
36631 63	OC-4 up through C-9 equipment	2	40,567	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
36631 69	Greater than OC-9 equipment	15	598,668	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
36631 73	Equipment not meeting SONET standards											
	Other carrier equipment, not elsewhere classified	14	239,946	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
36631 79	Other communications systems and equipment	158	4,184,472	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)

Note: The percent of estimation of each item is indicated as follows:

^a10 to 25 percent of this item has been estimated. ^bOver 26 percent of this item has been estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. (X) Not applicable.

¹Total shipments" data for product codes 36631 15, 36631 17, and 36631 19 have been combined with product code 36631 21 to avoid disclosing figures for individual companies.²Total shipments" data for product codes 36631 57 and 36631 59 have been combined with product code 36631 63 to avoid disclosing figures for individual companies.

Table 23. **SHIPMENTS, IMPORTS, AND EXPORTS OF COMMUNICATIONS EQUIPMENT, INCLUDING TELEPHONE, TELEGRAPH, AND OTHER ELECTRONIC SYSTEMS AND EQUIPMENT: 1992**

[Value in thousands of dollars]

Product code	Product description	Manufacturers' shipments (value f.o.b. plant)	Exports of domestic merchandise (value at port) ¹	Imports for consumption (value) ²
36611 41, 43, 45, 49	Private branch telephonic exchange switching apparatus	751,741	86,764	23,953
36611 23, 28	Central office telephonic switching apparatus	4,227,215	177,976	35,669
36611 51, 55, 91	Telephonic switching apparatus, n.e.c	2,150,527	79,077	23,136
36611 98	Parts components, and subassemblies for telephone switching and switchboard apparatus	172,361	751,579	466,661
36613 01, 05, 09	Repeaters and line transceivers, carrier line equipment	599,176	13,233	-
36613 30, 33, 36, 41, 45, 49, 51, 55, 59	Carrier line equipment, n.e.c	2,919,447	168,065	148,290
36614 21, 25, 29, 38	Telephone sets (except cordless handset telephones)	351,635	166,593	1,011,713
36614 36	Cordless handset telephones	-	(S)	1,011,781
36613 61, 65	Modems, including auxiliary sets	1,531,838	377,572	135,230
36614 41, 43, 45, 47, 49, 51, 59, 97	Telephone and telegraphic equipment, n.e.c., including voice frequency equipment	4,014,588	537,397	440,410
36614 55	Telephone key systems	353,680	26,366	22,410
36614 61, 63, 65, 67, 69	Telephone answering devices	573,958	106,221	318,926
36614 91	Facsimile communications equipment (complete)	156,378	(NA)	1,025,540
336614 99	Parts, components and subassemblies for other telephone equipment	215,216	501,370	490,585
36632 12	Audio amplifiers and preamplifiers (except consumer and P.A. types)	146,011	120,516	238,044
36632 31, 34, 37	Transmitters, translators, RF power amplifiers, and related equipment	285,890	304,435	66,947
36632 34, 37	Television transmission apparatus, broadcast only	236,630	-	65,786
36631 35, 42, 44	Mobile radio systems and equipment, including transceivers, and portable receivers, transmitter and receiver, hand held	2,309,249	(S)	1,912,352
36632 13, 17	Other audio equipment (except consumer and P.A. types)	255,021	-	-
36693 12-13	Intercommunications systems, including inductive paging systems (selective calling)	271,620	91,840	82,986
36632 24	Television cameras (except consumer and P.A. types)	(NA)	71,079	1,813,816
36631 53, 55, 36632 43	Antennae systems, including broadcasting, transmitting, and community antennae systems	926,426	431,460	231,857
36332 41, 44, 46, 49	Cable TV and closed circuit TV systems and equipment, including AM and FM transmitters	537,346	129,059	421,847
36693 12-13	Intercommunications systems, including inductive paging systems (selective calling)	271,620	10,312	24,348
36691 48, 52, 59	Intrusion detection alarm systems	709,339	37,696	147,821

See footnotes at end of table.

Table 23. **SHIPMENTS, IMPORTS, AND EXPORTS OF COMMUNICATIONS EQUIPMENT, INCLUDING TELEPHONE, TELEGRAPH, AND OTHER ELECTRONIC SYSTEMS AND EQUIPMENT: 1992—Continued**

[Value in thousands of dollars]

Product code	Product description	Manufacturers' shipments (value f.o.b. plant)	Exports of domestic merchandise (value at port) ¹	Imports for consumption (value) ²
36691 53	Smoke and heat detection alarms, ionization type	107,671	8,741	53,024
36691 54	Smoke and heat detection alarms, n.e.c., including photo cell type	178,075	22,919	26,672
36691 56-57	Central station and direct connect fire detection and prevention alarm systems	190,600	77,404	49,522
36692 42-43	Vehicular and pedestrian traffic control equipment	194,395	34,515	13,879
36692 45-46	Railway signals and attachments, electric	320,784	30,666	1,980
36991 81	Electronic trainers and simulators	1,234,877	205,565	206,050
36992 83-84, 89, 92, 95, 98	Laser systems and equipment (except medical and communications)	426,066	(NA)	(NA)
36992 85	Industrial laser equipment	162,077	28,674	63,283
36995 00	Ultrasonic equipment, n.e.c	113,521	13,864	4,789

- Represents zero. (NA) Not available. n.e.c. Not elsewhere classified. (S) Data withheld. Does not meet publication standards.

¹Source: Bureau of the Census report EM 545, "U.S. Exports."

²Source: Bureau of the Census report IM 145, "U.S. Imports for Consumption."

HISTORICAL NOTE

Data on selected electronic and associated products have been collected by the Bureau of the Census since 1961 on survey MA36N, Selected Electronics and Associated Products. In 1985, survey MA36N was divided into three annual surveys: MA36P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment; MA36Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components; and MA38R (formerly MA36R), Electromedical Equipment and Irradiation

Equipment (Including X-Ray). Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Ric Williamson, 301-763-7492 or Indrek Grabbi, 301-763-5434.

7.8 SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND RELATED EQUIPMENT

INTRODUCTION

These data cover all significant manufacturers of semiconductors, printed circuit boards, and other electronic components. The mailing panel included all establishments with 20 employees or more for industries 3671, 3672, 3674, 3675, 3676, 3677, 3678, and 3679.

The statistics were collected by mail on Bureau of the Census annual Form MA36Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components. The survey panel includes all known producers of these products except the firms excluded from the scope of the survey. Approximately 2,696 companies are included. No estimate is derived for the small firms excluded from the survey.

SUMMARY OF FINDINGS

During 1992, the total value of shipments of semiconductors, printed circuit boards, and other electronic components totaled \$63.5 billion. This represents a 2-percent increase from the 1991 total value of \$62.2 billion. The

1992 figure includes: electron tubes, \$2.9 billion, a decrease of 2 percent from 1991; printed circuit boards, \$6.3 billion, unchanged from 1991; semiconductor and related devices, \$25.8 billion, a decrease of 2 percent from 1991; capacitors, \$1.3 billion, an increase of 2 percent from 1991; resistors, \$696.5 million, a decrease of 3 percent from 1991; coils and transformers, \$1.1 billion, an increase of 6 percent from 1991; electronic connectors, \$3.2 billion, a decrease of 2 percent from 1991; and other electronic components, \$22.3 billion, an increase of 9 percent from 1991.

EXPLANATION OF TERMS

Research and Development. Dollar shipments reflect income development, design, and engineering services performed by the reporting plant in connection with the manufacture of the products shipped, whether included in a single production contract, or contracted for separately, but intended as preparation for the manufacture of the specific products.

Table 24. QUANTITY AND VALUE OF SHIPMENTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND OTHER ELECTRONIC COMPONENTS: 1992 AND 1991

[Quantity in 1,000 units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3671 —	Electron tubes	(NA)	(X)	2,932,402	(X)	2,997,633
36713 —	Transmittal, industrial, and special purpose electron tubes (except X-ray)	39	(X)	948,316	(X)	1,072,549
	Power and special purpose tubes:					
36713 15	High vacuum tubes, including triodes, multi-grid external and internal anodes, diodes and other	6	174	79,735	255	88,726
36713 24	Gas and vapor tubes, including thyatrons, ignitrons, gas duplexers, spark gaps and other	9	2,584	37,341	3,845	35,182
36713 34	Klystrons, including amplifier, reflex and other	6	1,351	81,229	1,266	88,530
36713 47	Magnetrons, including pulsed, fixed, tunable, cross-field, continuous wave and other	7	37	60,699	23	72,722
	Traveling wave tubes (TWT):					
	Forward wave:					
	Continuous wave (CW):					
36713 55	Up to and including 10 watts CW power output rating	5	6	17,759	59	26,206
36713 61	Over 10 watts CW power output rating	6	230	69,610	261	86,599
	Pulsed power:					
36713 65	Up to and including 1 kW peak power output rating	4	506	23,175	468	22,741
36713 66	Over 1 kW peak power output rating	5	302	78,709	'375	95,938
36713 92	Backward wave	3	66	7,061	42	3,566
	Light sensing tubes:					
36713 70	Camera tubes, photo emissive and photo conductive	5	45	30,212	56	46,546
36713 73	Image intensifiers and converters AND	4				
36713 76	Photo multipliers and other	3	503	196,908	'479	194,212
36713 83	Light emitting devices, including storage tubes all sizes, cathode ray tubes, color and monochrome (industrial and military), special display devices, including alphanumeric readout tubes, figure indicating tubes, and other	18	3,302	147,666	5,067	156,761
36713 96	Miscellaneous special-purpose tubes (reference cavities, radiation detection (geiger, neutron counters, etc.), beam deflection, decade counters, orbital beam, vacuum gauges, vacuum capacitors, switches, relays, etc.)	10	(X)	118,212	(X)	154,820
36714 01	Receiving type electron tubes, all types, including rebuilt	5	205	24,635	401	21,614
	Cathode ray picture tubes	(NA)	17,648	1,959,451	'16,749	'1,903,470
	Television tubes, including any defective tube that has been rebuilt:					
36714 09	Color having a video display diagonal of: 50 cm and under (20 inches and under)	6	9,319	717,578	'9,153	'700,013
36714 12	Over 50 cm, but not exceeding 63 cm (21 through 25 inches)	4	3,025	334,889	'2,678	'293,190
36714 14	Exceeding 63 cm (26 inches and over) AND	6				
36714 27	Other, including rebuilt color and new and rebuilt black and white	3	5,304	906,984	'4,918	'910,267
36715 57	Electron tube parts, (except glass blanks) bases, getters, cathodes, headers, guns, etc.)	19	(X)	129,542	(X)	'120,345
36720 —	Printed-circuit (wiring) boards	494	(X)	6,274,944	(X)	6,275,337
36720 12	Single-sided glass printed	227	(X)	193,411	(X)	'188,846
36720 14	Double-sided glass printed	329	(X)	1,016,100	(X)	1,055,427
36720 16	Multilayer glass printed	307	(X)	3,263,869	(X)	'3,284,711
36720 18	Paper/mat/composite printed	25	(X)	56,797	(X)	'49,768

See footnotes at end of table.

Table 24. QUANTITY AND VALUE OF SHIPMENTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND OTHER ELECTRONIC COMPONENTS: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36720 —	Printed-circuit (wiring) boards—Cont.					
36720 22	Flexible circuit printed	46	(X)	273,301	(X)	313,282
36720 24	Other rigid laminates	95	(X)	988,367	(X)	918,560
36720 26	Receipts for contract work on printed circuit boards (etching, dip-soldering, imprinting, etc.)	69	(X)	483,099	(X)	464,743
3674 —	Semiconductors and related devices	(NA)	(X)	25,812,702	(X)	26,302,130
36741 —	Integrated microcircuit packages (1991 basis)	168	(X)	18,455,646	(X)	19,150,958
36741 10	Hybrid integrated circuits, thick film composed of material deposited by silk screen process on a passive substrate combined with discrete active or passive components*	60	(NA)	(NA)	(X)	808,084
36741 11	Hybrid integrated circuits, thin film composed of material deposited by vacuum deposition, sputtering or similar process on a passive substrate combined with discrete active or passive components*	31	(NA)	(NA)	(X)	669,810
36741 12	Hybrid integrated circuits, multichip circuits not incorporating film techniques. These are usually combinations of chips, active and/or passive; discrete package devices may be used for some but not all circuits	25	(NA)	(NA)	(X)	88,164
	Monolithic integrated circuits:					
	Bipolar integrated circuits:					
	Logic/Microprocessors:					
36741 16	Transistor-transistor logic (TTL), excluding microprocessors	15	(NA)	(NA)	3,667,700	1,403,721
36741 17	Current mode logic/emitter coupled logic (CML/ECL), excluding microprocessors	10	(NA)	(NA)	79,368	154,955
36741 22	Integrated injector logic (I ² L), excluding microprocessors	2	(NA)	(NA)	(D)	(D)
36741 23	Linear bipolar, excluding microprocessors ..	26	(NA)	(NA)	2,247,117	1,690,743
36741 24	Microprocessors	8	(NA)	(NA)	10,683	107,008
36741 25	Other bipolar logic	13	(NA)	(NA)	70,732	216,729
	Memory:					
36741 27	Random access memories (RAM) AND	5				
36741 29	Read only memories (ROM)	3	(NA)	(NA)	32,260	56,665
36741 33	Other bipolar memories	6	(NA)	(NA)	23,521	148,769
36741 35	Other bipolar integrated circuits	18	(NA)	(NA)	746,121	576,120
	Metal oxide semiconductor (MOS) integrated circuits:					
	Logic/Microprocessors:					
36741 37	MOS linear ICs, excluding microprocessors and microcontrollers	20	(NA)	(NA)	302,081	727,075
36741 39	Microprocessors, 4-bit AND	4				
36741 40	Microprocessors, 8-bit	15	(NA)	(NA)	75,754	288,929
36741 41	Microprocessors, 16-bit	13	(NA)	(NA)	51,141	716,133
36741 42	Microprocessors, 32-bit	10	(NA)	(NA)	22,892	2,784,087
36741 43	Microcontrollers, 4-bit AND	4				
36741 44	Microcontrollers, 8-bit AND	11				
36741 45	Microcontrollers, 16-bit	6	(NA)	(NA)	209,823	695,428
36741 46	Microcontrollers, 32-bit	10	(NA)	(NA)	-	-
36741 47	Other MOS microprocessors	11	(NA)	(NA)	63,064	415,889
36741 48	Other MOS microcontrollers	10	(NA)	(NA)	82,494	387,823
	Memory:					
	MOS memories, dynamic random access (DRAMs):					
36741 50	DRAMs, under 9,000 bits AND	1				
36741 51	DRAMs, 9,000 - 19,999 bits	4	(NA)	(NA)	1,519	9,444
36741 52	DRAMs, 20,000 - 39,999 bits	-	-	-	-	-
36741 53	DRAMs, 40,000 - 79,999 bits	5	(NA)	(NA)	2,440	11,237
36741 54	DRAMs, 80,000 - 299,999 bits	9	(NA)	(NA)	65,823	350,695
36741 55	DRAMs, 300,000 bits - 1,999,999 bits	8	(NA)	(NA)	140,924	915,881
36741 60	DRAMs, 2,000,000 bits and over	4	(NA)	(NA)	21,374	553,772
	MOS memories, static random access, (SRAMs):					
36741 56	SRAMs, under 9,000 bits	9	(NA)	(NA)	20,228	81,451
36741 57	SRAMs, 9,000 - 19,999 bits	9	(NA)	(NA)	14,658	74,640

See footnotes at end of table.

Table 24. **QUANTITY AND VALUE OF SHIPMENTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND OTHER ELECTRONIC COMPONENTS: 1992 AND 1991—Continued**

[Quantity in 1,000 units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3674 —	Semiconductors and related devices—Cont.					
86741 —	Integrated microcircuit packages (1991 basis)—Cont.					
	Monolithic integrated circuits—Cont.					
	Metal oxide semiconductor (MOS) integrated circuits—Cont.					
	Memory—Cont.					
	MOS memories, static random access, (SRAMs)—Cont.					
36741 58	SRAMs, 20,000 - 80,000 bits	13	(NA)	(NA)	65,070	257,854
36741 59	SRAMs, over 80,000 bits	15	(NA)	(NA)	29,533	252,883
	MOS memories, read only (Mask):					
36741 61	MOS ROMs (Mask), under 20,000 bits .	4	(NA)	(NA)	387	2,110
36741 62	MOS ROMs (Mask), 20,000 - 39,999 bits AND	1				
36741 63	MOS ROMs (Mask), 40,000 - 79,999 bits	2	(NA)	(NA)	1,154	4,322
36741 64	MOS ROMs (Mask), 80,000 - 199,999 bits AND	1				
36741 65	MOS ROMs (Mask), 200,000 - 400,000 bits AND	2				
36741 66	MOS ROMs (Mask), over 400,000 bits .	0	-	-	5,234	1,115
	MOS memories, erasable programmable ROMs (EPROMs):					
36741 67	MOS EPROMs, under 20,000 bits AND	4				
36741 68	MOS EPROMs, 20,000 - 39,999 bits . .	3	(NA)	(NA)	5,156	31,286
36741 69	MOS EPROMs, 40,000 - 79,999 bits . .	8	(NA)	(NA)	31,297	135,082
36741 70	MOS EPROMs, 80,000 - 199,999 bits . .	7	(NA)	(NA)	24,273	54,920
36741 71	MOS EPROMs, 200,000 - 400,000 bits .	9	(NA)	(NA)	79,915	170,709
36741 72	MOS EPROMs, over 400,000 bits	8	(NA)	(NA)	89,961	396,774
	MOS memories, electrically erasable programmable ROMs (EEPROMs):					
36741 74	MOS EEPROMs, under 20,000 bits	8	(NA)	(NA)	111,723	99,911
36741 75	MOS EEPROMs, 20,000 - 79,999 bits . .	6	(NA)	(NA)	5,549	39,470
36741 76	MOS EEPROMs, 80,000 - 200,000 bits AND	1				
36741 77	MOS EEPROMs, over 200,000 bits	5	(NA)	(NA)	4,377	95,490
36741 79	Other MOS memories	4	(NA)	(NA)	(D)	(D)
36741 89	Other MOS integrated circuits	45	(NA)	(NA)	1,305,418	3,128,113
36741 99	Other monolithic integrated circuits	27	(NA)	(NA)	92,283	483,304
3674 —	Semiconductors and related devices	(NA)	(X)	25,812,702	(NA)	(NA)
36741 —	Integrated microcircuit packages (1992 basis):	181	7,348,370	18,455,646	(NA)	(NA)
	Monolithic integrated circuits, digital, nonsilicon (e.g., gallium arsenide):					
36741 19	Memory AND	3				
36741 28	Logic and other	9	136,223	403,197	(NA)	(NA)
	Monolithic integrated circuits, digital, silicon:					
	Bipolar transistors, memory:					
36741 07	Static read-write random access (SRAM)	7	6,847	31,782	(NA)	(NA)
36741 09	Other memory	11	9,908	248,350	(NA)	(NA)
	Other bipolar transistors, including logic:					
36741 13	Transistor-transistor logic (TTL)	12	1,660,591	952,500	(NA)	(NA)
36741 14	Emitter coupled logic (ECL)	9	85,131	210,645	(NA)	(NA)
36741 15	Other	18	179,058	623,285	(NA)	(NA)

See footnotes at end of table.

Table 24. QUANTITY AND VALUE OF SHIPMENTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND OTHER ELECTRONIC COMPONENTS: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3674 —	Semiconductors and related devices—Cont.					
36741 —	Integrated micro circuit packages (1992 basis)—Cont.					
	Monolithic integrated circuits, digital, silicon—Cont.					
	Metal oxide semiconductor (MOS) field effect transistors:					
	Volatile memory DRAMS (dynamic read-write random access):					
36741 81	Not over 80k.....	9	7,574	40,356	(NA)	(NA)
36741 82	Over 80 k but not over 300 k	8	30,310	201,583	(NA)	(NA)
36741 83	Over 300 k but not over 3 MB	12	142,114	1,121,722	(NA)	(NA)
36741 84	Over 3 MB but not over 15 MB AND	6				
36741 85	Over 15 MB.....	2	20,648	224,133	(NA)	(NA)
	Volatile memory SRAMS (static read-write random access):					
36741 91	Not over 40 k	14	32,947	173,143	(NA)	(NA)
36741 92	Over 40 k but not over 80 k	17	57,698	272,895	(NA)	(NA)
36741 93	Over 80 k but not over 300 k	18	51,725	360,548	(NA)	(NA)
36741 94	Over 300 k but not over 3 MB AND	3				
36741 95	Over 3 MB.....	1	51,793	52,853	(NA)	(NA)
	Nonvolatile EEPROMs (electrically erasable programmable read-only memory):					
36741 96	Not over 80 k	10	145,196	162,983	(NA)	(NA)
36741 97	Over 80 k but not over 900 k AND	7				
36741 98	Over 900 k	5	22,538	197,479	(NA)	(NA)
	Nonvolatile EPROMs (erasable, except electrically), programmable read-only memory):					
36741 86	Not over 80 k	10	38,662	192,026	(NA)	(NA)
36741 87	Over 80 k but not over 900 k	14	233,918	511,402	(NA)	(NA)
36741 88	Over 900 k	9	138,321	144,430	(NA)	(NA)
36741 90	Other nonvolatile memory	23	466,067	626,926	(NA)	(NA)
	Other, including microprocessors, controllers, application specific integrated circuits (ASIC), and programmable logic arrays (PLA):					
36741 36	Microprocessors having an internal data bus of 8 bits or less	19	61,147	192,354	(NA)	(NA)
36741 38	Microprocessors having an internal data bus of 16 bits	14	283,349	854,421	(NA)	(NA)
36741 39	Microprocessors having an internal data bus of 32 bits or more	14	364,925	2,546,785	(NA)	(NA)
36741 18	Other (microcontrollers, ASICs, PLAs, etc.)	36	829,691	2,476,281	(NA)	(NA)
	Other digital, silicon, including bipolar combined with MOS:					
36741 20	Complementary BiMOS (BiCMOS)	5	1,141	53,675	(NA)	(NA)
36741 21	Other complementary (BiCMOS), including logic	6	326,166	177,429	(NA)	(NA)
36741 26	Other digital silicon ICs	14	85,833	210,639	(NA)	(NA)
	Nondigital silicon monolithic integrated circuits (e.g., linear, analog):					
36741 49	Radio frequency	5	27,241	42,293	(NA)	(NA)
36741 02	Other, analog	25	869,526	1,362,812	(NA)	(NA)
36741 03	Other, including mixed signal (analog/digital), logic AND	4				
36741 04	Other, including mixed signal (analog/digital), other	3	20,751	99,647	(NA)	(NA)
	Hybrid integrated circuits:					
36741 08	Radio frequency	17	2,138	261,426	(NA)	(NA)
36741 31	Other	45	77,468	647,977	(NA)	(NA)
36741 06	Other	46	881,725	2,777,669	(NA)	(NA)
36742 —	Transistors	37	(X)	733,729	(X)	'736,920
36742 63	Signal (less than 1 watt dissipation)	24	(X)	283,183	(X)	'232,721
36742 64	Power (1 watt or greater dissipation)	34	(X)	450,546	(X)	'504,199

See footnotes at end of table.

Table 24. QUANTITY AND VALUE OF SHIPMENTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND OTHER ELECTRONIC COMPONENTS: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3674 —	Semiconductors and related devices—Cont.					
36743 —	Diodes and rectifiers	45	8,830,779	660,940	5,567,425	653,478
36743 22	Signal diodes and assemblies thereof (maximum current 0.5 A)	14	94,997	38,087	92,893	'37,989
36743 42	Semiconductor rectifiers/power diodes and assemblies thereof (current rating greater than 0.5 A)	26	256,555	227,229	241,530	'262,697
36743 94	Zener diodes (voltage regulator and voltage reference diodes) AND	16				
36743 12	Selenium rectifiers	3	1,414,667	159,736	1,088,492	144,818
36743 83	Microwave diodes (mixers, detectors, varactors, parametric, harmonic generators, etc.)	17	7,064,560	235,888	'4,144,510	'207,974
36749 —	Other semiconductor devices	162	(X)	5,962,387	(X)	5,760,774
	Light-sensitive and light-emitting devices:					
36749 12	Solar cells	7	(X)	36,339	(X)	36,905
	Light-emitting diodes (LED):					
36749 14	Discrete, infrared and laser	11	(X)	304,559	(X)	'284,527
36749 16	Alpha or numeric displays	10	(X)	75,383	(X)	'79,912
36749 22	Photodiodes, including infrared detectors	12	(X)	63,598	(X)	'60,585
36749 24	Optical coupled isolators, including sensors and emitters	8	(X)	76,837	(X)	74,097
36749 29	Other light sensitive and light-emitting devices, including photovoltaic devices and photoelectric-magnetic devices	15	(X)	174,843	(X)	168,517
	Other semiconductor devices:					
36749 85	Thyristors (SCR's, triacs, PNP diodes) AND	11				
36749 86	Hall effect devices	2	(X)	123,581	(X)	113,311
36749 87	All other semiconductor devices (tunnel diodes, thermoelectric semiconductor junctions, metal-oxide varistors, solidstate transducers, and special semiconductor devices, n.e.c.)	31	(X)	858,219	(X)	'730,960
	Semiconductor parts:					
	Chips and wafers:					
36749 94	For integrated circuits (ICs)	54	(X)	2,912,176	(X)	2,675,542
36749 96	For discrete semiconductors	29	(X)	312,941	(X)	'331,553
36749 97	All other semiconductor parts (headers, packages, heat sinks, other accessories, etc.)	46	(X)	1,023,911	(X)	1,204,865
36750 —	Capacitors	84	(X)	1,250,592	(X)	'1,223,972
	Fixed:					
36291 —	Paper, plastic (film), metalized, and dual (film/paper) dielectric:	17	104,769	164,946	71,018	144,634
	ac types:					
36291 11	Less than 300 volts	13	10,049	15,702	6,210	11,917
36291 13	300 volts to 599 volts	17	83,082	122,252	53,415	106,351
36291 15	600 volts to 999 volts	11	7,049	12,975	5,844	9,955
36291 17	1,000 volts or over	10	4,589	14,017	5,549	16,411
	Capacitors having a reactive power handling capacity of 0.5 kVAR or less:					
	dc types/other:					
36750 19	Axial lead	29	42,183	47,735	59,211	'56,691
36750 21	Radial lead AND	14				
36751 24	Chips and other leaded devices	4	114,326	24,313	114,693	'28,184
	Tantalum electrolytic:					
36750 26	Metal case including foil and wet	6	47,273	57,665	49,484	73,255
36750 28	Dipped AND	2				
36750 31	Chips	4	1,026,598	180,715	736,262	152,104
36750 33	Other leaded (molded axial and molded radial)	3	103,271	24,957	188,308	47,422

See footnotes at end of table.

Table 24. QUANTITY AND VALUE OF SHIPMENTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND OTHER ELECTRONIC COMPONENTS: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36750 —	Capacitors—Cont.					
	Fixed:—Cont.					
	Aluminum electrolytic:					
36750 38	Less than 18 mm through 35 mm	4	51,510	46,782	50,997	53,625
36750 41	Small can style (over 35 mm through 51 mm)	5	1,539	7,639	2,599	14,420
36750 43	Other can style (over 51 mm) AND ac motor start	5				
36750 45		3	25,925	73,976	22,965	60,835
	Ceramic dielectric, single layer:					
36750 54	Axial and radial AND	7				
36750 51	Chips	2	367,880	17,862	552,010	21,901
	Ceramic dielectric, multilayer:					
36750 53	Axial leads	4	137,267	10,300	141,708	12,002
36750 55	Radial leads	8	2,518,345	154,576	2,425,356	145,891
36750 57	Chips	13	13,226,559	349,598	10,964,093	313,071
	Other:					
36750 59	Mica dielectric	8	76,347	18,924	86,225	21,278
36750 61	All other fixed	20	101,602	55,212	156,496	72,349
	Variable:					
36750 63	Mica, ceramic or glass dielectric	5	21,357	29,370	18,955	26,793
36750 69	Other	7	2,464	10,440	3,385	12,901
36750 75	Parts of capacitors, including unfinished chips for further finishing and assembly	7	(X)	140,528	(X)	111,250
36760 —	Resistors	91	(X)	696,448	(X)	721,459
36760 11	Fixed carbon resistors, composition or film types	6	299,266	28,335	315,464	31,299
	Other fixed resistors (power capacity 20W or less):					
	Surface mounted, having two terminals:					
36760 24	Flat resistor chips	15	527,584	34,739	600,788	41,053
36760 25	Cylindrical leadless resistors, including metal film, metal oxide, and thick cermet film	8	50,148	9,227	39,511	6,683
	Surface mounted, having more than two terminals (resistor networks):					
36760 28	Dual-in-line package	4	102,490	30,721	102,278	27,754
36760 32	Other, including flat packs	6	42,391	17,075	47,268	18,998
	Resistors, having two leads:					
36760 34	Wirewound	21	192,128	76,255	203,681	79,935
36760 36	Other, including metal film, metal oxide, and thick cermet film	16	1,446,521	83,982	1,648,782	97,365
	Resistor networks, having more than two leads:					
36760 38	Single-in-line	12	221,296	62,258	313,347	56,133
36760 42	Dual-in-line	9	57,859	20,041	74,318	28,084
36760 44	Other	11	21,772	31,211	15,367	26,999
	Variable, non-wirewound:					
	Trimmers:					
36760 51	Single-turn, carbon and other film	9	115,089	38,788	108,247	40,897
36760 54	Multi-turn, carbon and other film AND	6				
36760 58	Surface mounted	4	76,871	55,133	60,972	45,223
	Potentiometers:					
36760 57	Precision type	11	17,505	49,504	21,220	57,432
36760 62	Panel type	4	7,684	9,545	13,388	15,155
	Variable, wirewound:					
36760 72	Variable wirewound (except potentiometers) including non-precision and trimmers	6	2,625	8,452	2,994	10,670
36760 57	Potentiometers, precision type	11	6,435	29,457	5,431	20,461
36760 62	Potentiometers panel type	5	3,670	10,658	3,919	18,009
	Miscellaneous:					
36760 75	Varistors	6	113,798	15,948	94,383	13,624
36760 77	Thermistors, bead type, disc, rod	15	116,244	73,894	108,914	74,371
36760 79	Parts for resistors	12	(X)	11,225	(X)	11,314
36770 —	Coils, transformers, reactors, and chokes for electronic applications	233	(X)	1,067,574	(X)	1,006,585
36770 32	Audio frequency (AF) transformers	91	23,303	92,001	20,344	84,385
36770 33	Low frequency (LF) chokes	87	5,623	40,196	4,265	31,501
36770 41	Plate and filament transformers (including auto-transformers, except toroidal)	74	12,748	131,371	12,395	123,933

See footnotes at end of table.

Table 24. QUANTITY AND VALUE OF SHIPMENTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND OTHER ELECTRONIC COMPONENTS: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36770 —	Coils, transformers, reactors, and chokes for electronic applications—Cont.					
36770 61	Pulse transformers, computer, and other types.....	93	30,650	133,348	32,861	143,256
36770 12	Radio frequency (RF) chokes	43	79,736	32,733	'79,674	'31,656
36770 13	Radio frequency (RF) coils	48	101,794	57,830	'104,548	'60,721
36770 14	Intermediate frequency (IF) transformers	28	4,362	20,609	4,520	21,138
36770 71	Television transformers and reactors (horizontal output, vertical deflection, focus coils, deflection yokes, etc.)	16	3,620	41,700	1,581	20,931
36770 91	Toroidal windings (transformers and reactors), except complete magnetic amplifiers.....	106	16,875	96,210	22,080	106,290
36770 92	Other (balun coils, permeability tuning devices, etc.)	89	(X)	421,576	(X)	'382,774
3678 —	Electronic connectors	(NA)	(X)	3,183,337	(X)	3,265,396
36781 —	Coaxial (RF) connectors	39	392,804	420,840	381,086	384,398
36781 21	Miniature (BNC, PNC, MHB)	21	26,007	91,460	22,140	68,793
36781 22	Subminiature (SMA, SMB, SMC)	16	64,993	89,347	'51,993	'77,319
36781 24	Other standard and precision	29	301,804	240,033	306,953	238,286
36782 —	Cylindrical connectors	29	155,737	477,670	138,068	483,401
36782 25	Heavy duty and standard	21	33,835	196,184	34,507	205,075
36782 29	Miniature	14	20,703	114,871	30,035	155,028
36782 31	Subminiature	9	101,199	166,615	73,526	123,298
36783 —	Rack and panel (rectangular) connectors	27	747,952	358,519	1,291,435	484,883
36783 35	Integral shell, Mil-C-22857 (8434) and similar types	16	200,190	155,463	290,297	148,426
	Subminiature:					
36783 42	Ribbon, including planar cable type	9	29,582	62,743	32,761	69,498
36783 44	D-Subminiature, including planar cable type	11	516,680	118,386	967,014	246,500
36783 46	Microminiatures	8	1,500	21,927	1,363	'20,459
36784 —	Printed circuit connectors	48	5,266,568	929,103	3,949,330	843,840
36784 44	Card insertion types	29	1,389,622	348,925	'875,451	'224,210
	Two-piece types:					
36784 48	Post, header and receptacle type	28	3,403,411	440,173	'2,909,721	'432,491
36784 49	Other two-piece types	17	473,535	140,005	'164,158	'187,139
36785 —	Other connectors including parts	81	(X)	997,205	(X)	1,068,874
36785 41	Hermetic sealed (except single-contact and coaxial types)	26	244,659	133,489	'304,517	'155,573
36785 51	Plate module types	6	7,388	27,809	7,104	30,067
36785 53	Fiber optic connectors	9	872	8,248	'855	'10,022
36785 59	Other planar cable (flat conductor or ribbon cable) excluding rack and panel (rectangular) types	17	723,209	229,518	'616,637	'249,153
36785 54	Miscellaneous special purpose	43	2,678,851	470,586	'2,623,114	'476,102
36785 56	Parts for connectors (connectors shipped but still requiring further manufacture)	23	(X)	127,555	(X)	147,957
3679 —	Electronic components and subassemblies, n.e.c	(NA)	(X)	22,309,151	(X)	20,383,831
36791 —	Filters (except microwave) and piezoelectric devices	108	(X)	442,443	(X)	451,476
	Filters (except microwave)	(NA)	48,122	205,284	40,656	192,991
36791 11	Mechanical, excluding optical lenses (germanium silicon, fused quartz, rock salt, and other)	4	114	17,207	'99	'16,293
	Radio frequency interference/electro magnetic interference (RFI/EMI) control filters:					
36791 13	Ceramic dielectric	11	22,522	83,239	13,551	68,268
36791 15	Combination or other dielectric	15	15,909	78,099	'19,423	'80,399
36791 21	Electronic wave filters (LC band and high pass)	28	9,577	26,739	'7,583	'28,031
	Piezoelectric devices	(NA)	(X)	237,159	(X)	258,485
	Oscillator crystals:					
36791 31	AT-cut	29	6,879	38,580	6,878	41,210
36791 33	Other	10	11,841	28,183	13,981	34,925

See footnotes at end of table.

Table 24. QUANTITY AND VALUE OF SHIPMENTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND OTHER ELECTRONIC COMPONENTS: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3679 —	Electronic components and subassemblies n.e.c.—Cont.					
36791 —	Filters (except microwave) and piezoelectric devices—Cont.					
	Piezoelectric devices—Cont.					
	Crystal oscillators:					
36791 35	Oven.....	5	46	10,149	'37	'9,380
36791 37	TCXO/VCXO.....	12	193	18,990	225	21,460
36791 39	Hybrid.....	14	2,269	26,519	3,140	38,134
36791 41	Other.....	9	2,376	30,487	2,036	27,425
	Crystal filters:					
36791 43	Monolithic, including filter crystals and/or monolithic filter units not assembled into filters.....	9	764	9,346	'778	'9,730
36791 45	Packaged AT-cut (packaged, including monolithic, tandem monolithic, and resonator filter assemblies).....	14	2,827	16,894	4,790	21,603
36791 47	Other.....	11	487	23,909	358	17,840
	Crystal blanks:					
36791 51	AT-cut.....	8	3,468	5,824	5,703	'7,459
36791 55	Other.....	8	6,323	28,278	8,419	29,319
36793 —	Microwave components and devices (except antenna), tubes, and semi-conductors.....	137	(X)	1,144,244	(X)	1,178,455
36793 11	Ferrite, including yttrium garnets, microwave components (circulators, isolators, phase shifters, attenuators, equalizers, limiters, mixers, etc.).....	42	(X)	223,029	(X)	'257,371
	Microwave devices, other than ferrite and solid state:					
36793 21	Attenuators (dummy loads, high and low-power terminations, etc.).....	42	(X)	57,096	(X)	83,132
36793 23	Cavities (amplifier cavities, coaxial tuned cavities, etc.).....	16	(X)	69,860	(X)	64,255
36793 25	Couplers (directional couplers, hybrid junctions, etc.).....	33	(X)	55,573	(X)	56,386
36793 27	Reactive microwave components, n.e.c.....	42	(X)	119,688	(X)	146,519
36793 29	Switches, coaxial and waveguide.....	36	(X)	75,306	(X)	'104,397
36793 31	Rigid waveguide and fittings (bend and twists, couplings, flanges, other simple waveguide components n.e.c.).....	29	(X)	70,787	(X)	59,075
36793 33	Flexible waveguides and fittings.....	19	(X)	29,920	(X)	38,004
36793 51	Other microwave components (except ferrite devices) (coaxial to waveguide and other transitions, duplexers and diplexers, holders and mounts, linear and circular polarizers, magnetron test plumbing, rotary joints and sector scan joints, mixer arrays, shutters, tuners, windows, etc.).....	49	(X)	184,848	(X)	'187,468
36793 71	Microwave subassemblies, including parametric amplifiers and other solid-state assemblies.....	34	(X)	258,137	(X)	181,848
36795 —	Transducers, electrical/electronic input or output, n.e.c.....	79	52,740	817,513	49,325	'799,509
36795 11	Electroacoustic (sonar, ultrasonic, vibration*, etc.).	15	20,206	101,249	20,689	'100,702
	Electromechanical:					
36795 21	Accelerometers*.....	15	212	106,375	224	'115,958
36795 23	Pressure*.....	39	18,674	305,459	16,702	'294,823
36795 25	Strain gauges and other mechanical*.....	21	467	88,587	442	88,521
36795 31	Thermoelectric (pyrometers, thermo couples*, etc.).....	8	1,992	74,578	1,640	'63,109
36795 98	Other (optical, chemical, magnetic, nuclear*, etc.).....	20	11,189	141,265	9,628	'136,396
36796 —	Switches, mechanical types for electronic circuitry...	70	(X)	538,414	(X)	545,143
36796 15	Slide, including rocker, miniature and sub-miniature*.....	15	(X)	58,648	(X)	'44,673
36796 19	Rotary selector, including lever and jog-lever, miniature and subminiature*.....	23	(X)	63,959	(X)	'67,924

See footnotes at end of table.

Table 24. QUANTITY AND VALUE OF SHIPMENTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND OTHER ELECTRONIC COMPONENTS: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3679 —	Electronic components and subassemblies n.e.c.—Cont.					
36796 —	Switches, mechanical types for electronic circuitry—Cont.					
36796 21	Keyboard*	7	(X)	38,090	(X)	31,294
36796 25	Pushbutton*	24	(X)	47,709	(X)	48,141
36796 29	Snap-action*	10	(X)	21,945	(X)	25,763
36796 31	Thumbwheel*	7	(X)	17,579	(X)	14,027
36796 14	Membrane	7	(X)	26,741	(X)	17,644
36796 12	Toggle standard type AND	13				
36796 13	Toggle miniature and subminiature	4	(X)	58,093	(X)	54,358
36796 33	DIP	5	(X)	48,117	(X)	42,753
36796 39	Other	32	(X)	157,533	(X)	198,566
36798 —	Printed circuit assembly (loaded boards, sub-assemblies, and modules), (except filters and other items listed elsewhere) ^{1 2}	336	(X)	14,224,827	(X)	12,590,366
36798 31	Under \$1,000 (MLP)	19	(X)	597,860	(X)	282,721
36798 33	\$1,000 to \$4,999 (MLP)	15	(X)	404,933	(X)	270,661
36798 35	\$5,000 to \$14,999 (MLP)	11	(X)	71,381	(X)	88,066
36798 37	\$15,000 to \$49,999 (MLP) AND	6				
36798 39	\$50,000 to \$249,999 (MLP) AND	2				
36798 41	\$250,000 to \$1,000,000 (MLP)	1	(X)	86,877	(X)	178,554
36798 43	Over \$1,000,000 (MLP)	-	(X)	-	(X)	-
36798 15	Computer processors (system boards, array processors, etc.)	48	(X)	2,036,204	(X)	2,632,111
36798 11	Memory boards	50	(X)	1,826,560	(X)	1,598,173
36798 13	Peripheral controllers (graphic boards, drive controller, etc.)	44	(X)	1,463,407	(X)	652,916
36798 17	Instrumentation boards (data acquisition, signal analysis, etc.)	35	(X)	2,125,802	(X)	2,033,952
36798 19	Communication boards (LAN boards, D/A and A/D converters, etc.)	56	(X)	716,034	(X)	615,115
36798 21	Other board level products for use within a computer system	23	(X)	844,532	(X)	771,998
36798 22	Other boards	87	(X)	2,210,779	(X)	1,981,313
36798 29	Receipts for contract work by contract assemblers, board stuffers, and related job shops	69	(X)	1,355,021	(X)	1,051,588
36799 —	Electronic components and subassemblies, n.e.c. ...	521	(X)	6,285,954	(X)	5,997,317
	Antenna systems (except structural towers sold separately):					
36799 07	Home antenna	11	11,906	104,707	11,020	99,616
36799 08	Auto antenna	8	13,035	51,745	11,861	46,171
36799 09	Antenna accessories, sold separately (pedestals, drives, passive reflectors, rotators, radomes, etc.)	21	(X)	106,519	(X)	87,166
36799 11	Delay lines (distributed constant, lumped constant, magnetostrictive, ultrasonic, etc.)	22	5,064	32,397	6,646	36,570
36799 13	Oscillators (except instrumentation and crystal types)	12	7,203	101,527	8,648	110,909
36799 20	Magnetic recording and reproducing heads, including audio, video, digital and instrumentation	21	69,966	977,021	53,207	707,196
	Static power supply converters for electronic applications, sold separately:					
36799 21	Regulated	90	173,761	788,766	152,987	847,793
36799 22	Other (unregulated, variable frequency, ac, dc, converters and inverters, vibrator, etc.)	61	(X)	797,963	(X)	801,386
36799 31	Electronic cable harnesses and cable assemblies	197	(X)	1,161,299	(X)	1,151,366
36799 33	Cryogenic cooling devices (cryostats, etc.) for infrared detectors, masers	4	(X)	47,095	(X)	58,306
36799 51	Liquid crystal displays (LCD) and other liquid devices	9	(X)	62,888	(X)	63,551
36799 55	Magnetic cores	16	(X)	160,825	(X)	158,323

See footnotes at end of table.

Table 24. QUANTITY AND VALUE OF SHIPMENTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS, AND OTHER ELECTRONIC COMPONENTS: 1992 AND 1991—Continued

[Quantity in 1,000 units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3679 —	Electronic components and subassemblies n.e.c.—Cont.					
36799 —	Electronic components and subassemblies, n.e.c.—Cont.					
	Electronic parts, n.e.c. and specialized electronic hardware:					
	Sockets for electronic component insertion:					
36799 66	Integrated circuit sockets	9	(X)	203,811	(X)	159,112
36799 62	Other, including tube, relay, discrete semiconductors, ac and dc converters and inverters, etc.	17	(X)	57,572	(X)	59,922
36799 98	All other electronic parts and specialized electronic hardware, n.e.c.	138	(X)	1,631,819	(X)	1,609,930
	Electronic research, development, testing, and evaluation (receipts or billings, not reported as shipments of specific products):					
99980 42	Systems	20	(X)	137,402	(X)	194,808
99980 43	Equipment and subassemblies	39	(X)	438,975	(X)	111,219
99980 44	Component parts	52	(X)	117,153	(X)	126,269
99980 46	Basic scientific electronic research	22	(X)	206,244	(X)	196,400
99980 47	Design and engineering services	39	(X)	643,456	(X)	633,621
99980 48	Software	7	(X)	21,366	(X)	20,400
99980 49	Testing	-	(X)	-	(X)	-
99980 50	Supplies and accessories sold with components ..	6	(X)	2,388	(X)	8,988

*Similar products are collected on Current Industrial Report forms MA36A, *Switchgear, Switchgear Apparatus, Relays, and Industrial Controls* and MA36K, *Wiring Devices and Supplies*.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. n.e.c. Not elsewhere classified. ¹Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹MLP Manufacturer's list price.

²These data are collected on two Current Industrial Report forms, MA35R, *Computer and Office Accounting Machines*, and MA36Q *Semiconductors, Printed Circuit Boards, and Other Electronic Components*.

Table 25. SHIPMENTS, IMPORTS, AND EXPORTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS AND OTHER ELECTRONIC COMPONENTS: 1992

[Value in thousands of dollars]

Product description	Manufactures' shipments (value, f.o.b. plant)	Exports of domestic merchandise (value at port) ¹	Imports for consumption (value in foreign country) ^{2,3}
High vacuum tubes	79,735	30,119	9,755
Gas and vapor tubes	37,341	5,822	1,375
Microwave tubes, klystrons	81,229	12,528	13,390
Microwave tubes, magnetrons	60,699	10,170	55,032
Microwave tubes, TWTs	196,314	56,000	23,400
Light sensing tubes	227,120	117,191	24,353
Other light emitting devices and special-purpose tubes	147,666	12,648	26,880
Receiving type electron tubes	24,635	5,835	3,540
Television tubes, color and black and white new and rebuilt	1,959,451	195,355	145,465
Electron tube parts (except glass blanks)	129,542	137,842	315,331
Printed circuit boards	6,274,944	1,092,274	1,281,960
Monolithic integrated circuits, nonsilicon:			
Memory AND			
Logic and other	136,223	78,442	60,281
Monolithic integrated circuits, digital, silicon:			
Bipolar transistors, memory:			
SRAMs	31,782	73,451	10,331
Other memory	248,350	29,557	80,289
Other bipolar transistors, including logic:			
Transistor-transistor logic (TTL)	952,500	93,906	532,418
Emitter logic (ECL)	210,645	32,494	146,489
Other	623,285	267,852	98,534
Volatile memory DRAMS:			
Not over 80 k AND			
Over 80 k but not over 300 k	241,939	165,101	174,117
Over 300 k but not over 3 MB AND			
Over 3 MB but not over 15 MB AND			
Over 15 MB	1,345,855	168,489	321,900
Volatile memory SRAMs:			
Not over 40 k AND			
Over 40 k but not over 80 k AND			
Over 80 k but not over 300 k	806,586	133,310	440,151
Over 300 k but not over 3 MB AND			
Over 3 MB	52,853	19,472	233,398
Nonvolatile memory EEPROMs:			
Not over 80 k AND			
Over 80 k but not over 900 k AND			
Over 900 k	360,462	153,761	164,911
Nonvolatile memory EPROMs:			
Not over 80 k AND			
Over 80 k but not over 900 k AND			
Over 900 k	847,858	47,149	461,695
Other nonvolatile memory	626,926	423,028	549,695
Microprocessors 8 bits or less	192,354	229,045	546,065
Microprocessors 16 bits	854,421	65,445	160,536
Microprocessors 32 bits or more	2,546,785	396,326	369,144
Other (Microcontrollers, ASICs, PLAs, etc.)	2,476,281	572,108	2,863,287
Other, including bipolar combined with MOS:			
Complementary BiMOS (BiCMOS) memory	53,675	6,527	177,009
Other complementary BiMOS (BiCMOS), including logic AND			
Other digital silicon ICs	388,068	406,057	452,427
Non digital, silicon monolithic integrated circuits (e.g., linear, analog):			
Radio frequency AND			
Other analog AND			
Other, including mixed signal (analog/digital) logic AND			
Other, including mixed signal (analog/digital) other	1,504,752	79,040	1,305,063
Hybrid integrated circuits:			
Radio frequency AND			
Other	909,403	195,219	402,861
Transistors, signal	283,183	52,117	179,088
Transistors, power	450,546	119,629	348,869
Signal diodes and assemblies	38,087	13,130	40,328
Semiconductor rectifiers/power diodes and assemblies	227,229	52,176	183,461
Zener diodes AND			
Selenium rectifiers	159,736	(NA)	(NA)

See footnotes at end of table.

Table 25. **SHIPMENTS, IMPORTS, AND EXPORTS OF SEMICONDUCTORS, PRINTED CIRCUIT BOARDS AND OTHER ELECTRONIC COMPONENTS: 1992—Continued**

[Value in thousands of dollars]

Product description	Manufactures' shipments (value, f.o.b. plant)	Exports of domestic merchandise (value at port) ¹	Imports for consumption (value in foreign country) ^{2,3}
Microwave diodes.....	235,888	29,341	41,814
Solar cell	36,339	47,893	18,700
Light emitting diodes AND			
Photodiodes.....	443,540	39,157	133,391
Optical coupled isolators AND			
Other light sensitive and light emitting devices	254,680	21,389	123,457
Thyristors AND			
Other semiconductor devices	981,180	16,009	73,630
Chips and wafers for integrated circuits	2,912,176	5,543,552	1,060,421
Chips and wafers for discrete semiconductors	312,941	486,973	96,563
Other semiconductor parts.....	1,023,911	149,903	40,992
Capacitors, fixed, ac type, less than 300 volts.....	15,702	5,693	51,864
Capacitors, fixed, ac type, 300 - 599 volts	122,252	702	7,339
Capacitors, fixed, ac type, 600 - 999 volts	12,975	466	3,627
Capacitors, fixed, ac type, 1,000 volts or more	14,017	7,882	3,181
Capacitors, fixed, dc type, axial lead	47,735	797	5,582
Capacitors, fixed, dc type, radial lead AND			
Capacitors, fixed, dc type, chips and other leaded AND			
Capacitors, fixed, tantalum electrolytic, metal case	81,978	22,070	61,367
Capacitors, fixed, tantalum electrolytic, Dipped AND			
Capacitors, fixed, tantalum electrolytic, Chips	981,180	62,031	77,736
Capacitors, fixed, tantalum electrolytic, other leaded	24,957	38,989	26,456
Capacitors, fixed, aluminum electrolytic, 18 mm and less AND			
Capacitors, fixed, aluminum electrolytic, over 18 to 35 mm	54,421	23,775	137,105
Capacitors, fixed, other aluminum electrolytic AND			
Capacitors, fixed, ceramic dielectric, single layer, axial AND			
Capacitors, fixed, ceramic dielectric, single layer, radial AND			
Capacitors, fixed, ceramic dielectric, single layer, chips.....	91,838	10,862	39,698
Capacitors, fixed, ceramic dielectric, multilayer, axial	10,300	15,508	40,069
Capacitors, fixed, ceramic dielectric, multilayer, radial	154,576	31,586	90,883
Capacitors, fixed, ceramic dielectric, multilayer, chips	349,598	126,328	20,039
Capacitors, fixed, mica dielectric.....	18,924	2,749	4,211
Capacitors, other fixed	55,212	88,942	44,108
Capacitors, variable, mica/ceramic/glass dielectric	29,370	6,579	3,008
Capacitors, other variable.....	10,440	26,899	8,373
Capacitors, parts.....	140,528	148,427	15,028
Resistors, fixed	399,844	68,648	186,248
Resistors, variable, non-wirewound	152,970	73,493	7,107
Resistors, variable, wirewound, including varistors and thermistors	138,409	3,854	9,166
Resistors, parts.....	11,225	56,808	14,157
Transformers	1,067,574	89,146	485,716
Connectors, coaxial	420,840	34,090	69,423
Connectors cylindrical	477,670	23,904	26,925
Connectors, rack and panel.....	358,519	21,351	12,361
Connectors, printed circuit	929,103	50,428	47,569
Connectors, other.....	997,205	(NA)	(NA)
Filters (except microwave) and piezoelectric devices.....	442,443	61,778	177,513
Switches, slide	58,648	5,210	24,912
Switches, rotary selector.....	63,959	8,221	21,973
Switches, push button.....	47,709	12,819	70,024
Switches, snap-action	21,945	45,411	54,754
Switches, other.....	346,153	440,702	1,393,405
Magnetic recording and reproducing heads	977,021	8,917	11,166

(NA) Not available.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.²Source: Bureau of the Census report IM 145, *General Imports for Consumption*.³This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry into the United States.

HISTORICAL NOTE

Data on selected electronic and associated products have been collected by the Bureau of the Census since 1961 on survey MA36N, Selected Electronics and Associated Products. In 1985, survey MA36N was divided into three annual surveys: MA36P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment; MA36Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components; and MA38R (formerly MA36R), Electromedical Equipment and

Irradiation Equipment (Including X-Ray). Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Michael Narod, 301-763-2529 or Michael Yamaner, 301-763-7866.

7.9 SELECTED INSTRUMENTS AND RELATED PRODUCTS

INTRODUCTION

These data cover firms engaged in the manufacture of instruments and related products, except very small firms (generally less than 20 employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies.

The statistics were collected by mail on Bureau of the Census annual Form MA38B, Selected Instruments and Related Products. The survey panel includes all known producers of these products, except the very small firms excluded from the scope of the survey. Approximately 1,850 companies are included. No estimate is derived for the small firms excluded from the survey.

SUMMARY OF FINDINGS

During 1992, the total value of shipments of selected instruments and related products totaled \$64.0 billion, down 2 percent from the 1991 value of \$65.1 billion. The 1992 figure includes automatic regulating, control, and solenoid valves, \$2.0 billion, an increase of 4 percent over 1991; search, detection, navigation, guidance, aeronautical, and nautical systems, instruments, and equipment, \$32.7 billion, a decrease of 5 percent from 1991; laboratory apparatus and furniture; \$1.7 billion, an increase of 4 percent from 1991; controls for monitoring residential and commercial environments, and appliance regulating controls, \$2.2 billion, an increase of 9 percent from 1991; process control instruments, \$5.4 billion, an increase of 3 percent from 1991; fluid meters and counting devices, \$2.4 billion, an increase of 6 percent from 1991; analytical and scientific instruments (except optical), \$4.7 billion, an increase of 3 percent from 1991; optical instruments and

lenses, \$1.8 billion, virtually unchanged from 1991; measuring and controlling devices, n.e.c., \$3.9 billion, an increase of 1 percent from 1991.

EXPLANATION OF TERMS

Electronic Systems—Unified Architecture. Includes system-type control, display and computing instruments actuated from standardized electrical transmission signals in which control and signal conditioning are integral with the display/operator interface.

Electronic Systems—Non-Unified Architecture. Includes system-type instruments and related equipment actuated from standardized electrical transmission signals in which control and signal conditioning are separated from the display/operator interface. Equipment includes single loop and multi-loop controllers, dedicated operator stations, shared CRT-based operator work stations, process I/O equipment, communication equipment and other related miscellaneous equipment, such as power supplies, racks, panels, cables, console furniture, printers, tape drives, mounting hardware, shelves, nests, calibrators, and testers. Does not include multifunction process computers reported in 38230 12.

Industrial Multi-Function Process Computers. Includes the hardware and standard software of the CPU and all peripheral equipment of the computers that provide centralized processing intelligence for two or more of the following functions: data manipulation and reporting, supervisory control and data acquisition, calculations using control algorithms, data base management, use of a high-level programming language and operator interface.

Table 26. **VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS, BY CLASS OF PRODUCT: 1983 TO 1992**

[Millions of dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
34918	Automatic regulating and control valves	1,569.1	1,537.4	1,418.0	1,331.0	1,261.9	1,221.0	1,302.3	1,324.3	1,190.4	1,146.5
34919	Solenoid-operated valves (except nuclear and fluid power transfer)	404.2	360.1	345.9	374.3	338.3	326.9	284.8	280.1	266.6	202.6
38121	Aeronautical, nautical, and navigational instruments	2,430.6	2,671.6	2,517.5	2,521.4	2,365.2	2,269.7	1,788.9	1,592.0	1,466.9	1,428.6
38122	Search and detection, navigation and guidance systems and equipment ¹	30,278.8	31,773.8	32,420.2	30,840.2	31,144.9	30,910.9	29,503.7	27,056.8	22,822.6	19,981.6
38210	Laboratory apparatus and laboratory furniture ²	1,681.0	'1,612.0	1,675.0	1,697.9	1,564.9	1,549.1	1,329.9	1,138.1	1,101.1	976.2
38220	Controls for monitoring residential and commercial environments and appliance regulating controls	2,155.8	1,982.2	1,982.0	2,224.4	2,207.2	2,092.7	1,965.9	1,925.6	1,943.3	1,678.8
38230	Process control instruments ..	5,407.9	'5,229.6	5,223.5	4,743.2	4,347.9	4,083.6	3,894.5	3,963.2	3,803.4	3,289.9
38242	Integrating and totalizing meters for gas and liquids ...	720.7	697.8	724.6	647.3	609.6	589.3	525.8	548.6	493.4	449.4
38243	Counting devices	268.8	'226.3	209.8	206.0	192.5	197.8	177.4	174.9	209.4	172.9
38244	Motor vehicle instruments ³ ...	1,394.6	1,329.5	1456.6	637.4	681.6	232.1	197.3	(NA)	(NA)	(NA)
38251	Integrating instruments, electrical	426.0	'389.6	396.1	401.4	387.6	400.5	402.9	402.6	418.4	358.0
38252	Test equipment for testing electrical, radio and communication circuits, and motors ..	6,305.7	'6,524.5	6,156.0	6,133.8	6,248.0	6,143.6	5,592.1	5,698.9	5,919.3	4,878.7
38253	Instruments to measure electricity	548.1	584.0	586.4	620.3	663.2	646.5	617.3	603.0	642.5	540.8
38260	Analytical and scientific instruments (except optical)	4,651.1	4,519.1	4,411.8	4,042.2	3,442.2	3,046.1	2,531.6	2,716.0	2,748.7	2,438.6
38271	Sighting, tracking, and fire control equipment, optical type	492.5	547.2	580.8	595.1	609.4	726.1	651.2	556.3	562.0	479.2
38274	Optical instruments and lenses ^{4 5}	1,342.2	1,292.3	1,251.8	1,273.8	1,269.8	1,214.8	1,245.2	1,345.8	1,442.9	1,059.9
38291	Aircraft engine instruments (except flight)	590.5	'682.0	579.0	508.0	504.5	520.0	505.4	393.1	337.5	335.2
38292	Physical properties and kinematic testing equipment	1,105.9	'1,023.7	1,012.4	946.0	893.9	859.4	775.1	660.8	651.9	564.4
38294	Nuclear radiation detection and monitoring instruments ..	581.4	570.4	566.7	606.0	654.3	637.2	587.2	542.2	494.9	503.4
38295	Commercial, geophysical, meteorological, and general purpose instruments ⁶	1,352.6	1,335.1	1,139.8	1,034.7	1,072.4	358.0	316.5	354.4	380.5	293.9
38296	Surveying and drafting instruments ²	265.7	234.6	273.9	270.2	269.5	246.5	229.9	379.5	326.5	246.2

(NA) Not available. ¹Revised by 5 percent or more from previously published figures.¹Prior to 1989, data for product code 38122 "Search and detection, navigation and guidance systems and equipment," were published in the Current Industrial Report MA36P, *Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment*.²Starting in 1987, product code 38210 (formerly 38112) includes laboratory furniture. Prior to 1987, laboratory furniture had been included in product code 38296 (formerly 38113).³The revision for 1990 in product code 38244, "Motor vehicle instruments," is due to the clarification of products in product code 38244 60, "Instrument panels, including cluster modules." Previously, a large part of these data were collected in product code 37149, "All other motor vehicle parts and accessories, new, n.e.c."⁴Prior to 1987, "Binoculars and astronomical instruments" and "Other optical instruments and lenses" were combined under product code 38235.⁵Beginning in 1992, product codes 38272, "Binoculars and astronomical instruments," and 38273, "Other optical instruments and lenses (except sighting, tracking and fire control)" have been combined into product code 38274, "Optical instruments and lenses"; years 1986 to 1991 have been restated.⁶Beginning in 1988, product code 38295 "Commercial, geophysical, meteorological, and general purpose instruments" includes additional product data (product codes 38295 51 and 38295 59) formerly collected on the Current Industrial Report MA36P, *Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment*.

Table 27. QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
34918 —	Automatic valves (regulating and control type, except nuclear)	137	(X)	1,569,098	(X)	1,537,376
	Engineered specification valves, designed to perform a precise degree of continuous modulation of controlled variables as the final element of a sophisticated instrumentation loop. (Commonly referred to as control valves and including certain globe, butterfly, ball, diaphragm, and similar body types, but excluding on-off valves):					
	Pneumatic actuated	(NA)	(X)	501,016	(X)	511,228
	Sliding stem valves	(NA)	(S)	226,579	(S)	236,660
34918 01	Globe body	22	(S)	171,275	(S)	180,024
34918 02	All other types	18	(S)	55,304	(S)	56,636
	Rotary valves	(NA)	75,879	126,015	78,153	123,040
34918 03	Ball	16	26,372	55,078	29,426	53,594
34918 04	Butterfly	12	34,461	49,377	30,663	41,474
34918 06	Plug AND	1				
34918 07	All other rotary valves, including eccentric disk	7	^a 15,046	21,560	^a 18,064	27,972
34918 08	All other pneumatic power-operated control valves	19	(S)	^a 47,549	(S)	48,267
34918 09	Parts for pneumatic actuated valves (sold separately)	30	(X)	100,873	(X)	103,261
	All other actuation, including electric-actuated and electro-hydraulic actuated	(NA)	(X)	173,189	(X)	170,693
	Sliding stem valves	(NA)	12,428	27,597	13,168	29,399
34918 11	Globe body	9	^a 5,057	^a 16,127	^a 5,430	17,210
34918 12	All other types	12	7,371	11,470	7,738	12,189
	Rotary valves	(NA)	(S)	18,121	(S)	18,272
34918 13	Ball	6	5,652	6,176	5,205	6,451
34918 14	Butterfly AND	9				
34918 16	Plug	3	(S)	11,945	(S)	11,821
34918 17	All other rotary valves, including eccentric disk	-	-	-	-	-
34918 18	All other power-operated (except pneumatic) control valves	19	(S)	114,155	(S)	106,517
34918 21	Parts for all other power-operated (except pneumatic) control valves	12	(X)	13,316	(X)	16,505
34918 23	Valve actuators (sold separately)	19	^b 123,323	87,911	131,553	98,858
	Regulator valves (equipped with a self-generating power actuator acting in response and in proportion to a change in value of the controlled variable, such as temperature, pressure, flow level, etc.):					
34918 25	Remote-sensing direct actuated temperature regulators ¹	19	3,149	88,928	2,270	77,317
34918 30	Self-contained direct actuated pressure regulators (except instrument type and safety relief valves) ¹	34	4,576	^a 201,471	4,446	190,838
34918 35	Pilot (internal and external) actuated pressure regulators ¹	28	213	68,358	220	68,916
34918 41	Self-contained direct acting precision and instrument type pneumatic (air and gas) pressure regulators ¹	13	523	^a 35,941	506	32,821
34918 45	Flow regulators for gas, vapors, or liquids ¹	39	12,320	171,532	10,233	153,270
34918 48	Other regulator valves ¹	33	3,572	187,819	3,571	183,609
34918 49	Parts for regulator valves (sold separately)	34	(X)	52,933	(X)	49,826
34919 —	Solenoid-operated valves (except nuclear and fluid power transfer)	43	(X)	404,201	(X)	360,069
	Solenoid-operated valves of the type actuated by the movement of a plunger or armature due to the magnetic field created by electrically energizing a solenoid coil, excluding torque motor rotary type actuated valves and servo-valves:					
	Solenoid-operated valves (except nuclear and fluid power transfer valves):					
	Commercial/industrial types:					
34919 56	Two-way ¹	27	5,314	183,132	4,522	162,799
34919 58	Three-way ¹	14	444	23,276	438	20,509
34919 59	Other ¹ AND	14				

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

▲ [Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
34919 —	Solenoid-operated valves (except nuclear and fluid power transfer)—Cont.					
	Solenoid-operated valves—Cont.					
	Solenoid-operated valves (except nuclear and fluid power transfer valves)—Cont.					
34919 61	Household appliance type ¹	2	17,999	157,313	16,039	136,461
34919 79	Parts, components, and operators for solenoid-operated valves (except nuclear and fluid power transfer valves, sold separately)	23	(X)	40,480	(X)	40,300
38121 —	Aeronautical, nautical, and navigational instruments (except aircraft engine instruments)	93	(X)	2,430,601	(X)	2,671,567
	Flight and navigation sensors, transmitters, and displays:					
38121 01	Compasses (magnetic and gyroscopic)	17	(X)	325,727	(X)	350,208
38121 08	Altimeters (except radio and radar altimeters)	9	(X)	36,229	(X)	(D)
38121 10	Airspeed indicators, including machmeters and air data computers	17	(X)	379,859	(X)	'398,833
38121 12	Acceleration indicators and systems components	7	(D)	(D)	(D)	(D)
38121 13	Rate-of-climb indicators	9	5,814	6,785	6,333	8,163
38121 15	Angle-of-attack indicators	8	5,128	14,798	6,301	16,314
38121 17	Bank and turn indicators	2	(D)	(D)	(D)	(D)
38121 18	Artificial horizon flight instruments	7	(S)	16,324	(S)	19,347
38121 20	Other aerospace and navigational instruments	30	(X)	440,037	(X)	483,196
	Gyroscopes sold separately:					
38121 21	Vertical	5	1,079	12,715	'1,521	'17,394
38121 23	Directional	6	10,467	34,652	8,599	'27,222
38121 25	Free, torqued and untorqued AND	2				
38121 26	Rate, inertial grade	4	(X)	54,192	(X)	62,026
38121 28	Rate, noninertial grade	6	(X)	126,670	(X)	169,590
	Airframe equipment instruments:					
38121 61	Position indicators (mechanical, as for landing gear, cowl flaps, stabilizers, etc.)	14	(X)	^b 25,427	(X)	'20,154
38121 63	Hydraulic system (both electrical and mechanical measuring means, as for liquid level and temperature and pressure indicators)	10	(X)	27,130	(X)	32,125
38121 64	Cabin environmental measuring and control instruments (air-conditioning and heating, cabin pressure, oxygen, etc.)	13	(X)	71,271	(X)	'66,729
38121 77	Thermocouple and thermocouple lead wire (aircraft type only) AND	2				
38121 80	Other aerospace flight instruments	25	(X)	448,409	(X)	'441,025
38121 85	Nautical instruments (all types, including temperature, speed, pitch, and roll instruments and system components, etc.)	17	^a 410,519	86,999	^a 624,900	111,772
38121 89	Parts and components for aeronautical, nautical, and navigational instruments (except aircraft engine instruments, sold separately)	27	(X)	160,115	(X)	209,569
38122 —	Search and detection systems and navigation and guidance systems and equipment ²	224	(X)	30,278,753	(X)	31,773,750
38122 11	Light reconnaissance and surveillance electronic systems and equipment (infrared, ultraviolet, and visible light), including bomber-defense equipment, fire control equipment (except optical), IR fuses, space satellite and other IR detection and warning systems, sniperscopes, snooperscopes, night driving equipment, mapping equipment, photographic equipment, wake detection; and electronic checkout, monitoring, evaluation and other electronic support equipment for light reconnaissance and surveillance electronic systems	41	(X)	2,514,427	(X)	2,593,355

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38122 —	Search and detection systems and navigation and guidance systems and equipment—Cont.					
38122 13	IFF equipment	11	(X)	106,882	(X)	177,363
38122 15	Proximity fuses	7	(X)	311,594	(X)	314,473
	Radar systems and equipment:					
	Search, detection, and acquisition radar systems and equipment (BMEWS, airborne and other early warning radar, air traffic control radar, air defense and fighter control radar, ship radar, harbor control radar, meteorological radar, etc.):					
38122 17	Airborne and missile/space radar	27	(X)	1,441,539	(X)	1,465,505
38122 19	Ship (marine) radar	20	(X)	980,155	(X)	1,016,818
38122 21	Ground radar	31	(X)	1,061,722	(X)	1,035,487
	Tracking radar systems and equipment (fire control, bombing, bombing navigational radar, aircraft and missile tracking radar, etc.):					
38122 23	Airborne and missile/space radar	17	(X)	1,604,227	(X)	1,881,851
38122 25	Ship (marine) radar	16	(X)	333,793	(X)	325,135
38122 27	Ground radar	18	(X)	1,083,828	(X)	1,288,136
	Instrumentation radar systems and equipment (altimeters, highway speed control radar, missile and space satellite tracking range radar, GCA and other precision approach radar, etc.):					
38122 29	Airborne, missile/space and ship (marine) radar AND	10				
38122 31	Ground radar	5	(X)	158,742	(X)	169,543
38122 33	Electronic checkout, monitoring, evaluation, and other electronic support equipment for radar systems	21	(X)	463,712	(X)	524,087
	Sonar search, detection, tracking and communication systems and equipment including ASW (sonar telephone communication equipment, depth finding, fire control, fusing, guidance, hydrophones, mapping, sonabuys, navigation, sonar fish finders, sonar range instrumentation, and other):					
38122 35	Surface ship applications (destroyers, destroyer escort, etc.)	24	(X)	738,152	(X)	664,823
38122 37	Submarine applications	28	(X)	1,404,595	(X)	1,274,822
38122 39	Airborne	18	(X)	347,180	(X)	413,895
38122 41	Electronic checkout, monitoring, evaluation, and other electronic support equipment for sonar systems and submerged fixed systems	12	(X)	253,381	(X)	296,448
38122 43	Specialized command and control data processing and display equipment, sold separately from complete systems	27	(X)	1,032,900	(X)	1,542,653
38122 45	Search, detection, identification, and tracking systems and equipment, n.e.c.	30	(X)	1,462,847	(X)	1,392,683
	Electronic warfare systems and equipment:					
	Countermeasures equipment:					
38122 47	Jamming equipment, communications, and radar	32	(X)	1,771,771	(X)	1,652,125
38122 49	Underwater countermeasures equipment AND	5				
38122 51	Other active countermeasures equipment, excluding passive materials such as chaff, window, needles, rope, etc.	17	(X)	748,709	(X)	597,135
38122 53	Specialized electronic and communication intelligence equipment, including specially designed DF equipment, signal reduction and processing equipment, and signal analyzers and display equipment	45	(X)	2,260,436	(X)	2,484,183
	Missile and space vehicle systems and equipment (beam riders, command guidance, inertial systems, infrared homing systems, radar systems, stellar trackers, television systems, combination systems, etc.):					
38122 55	Missile-borne and space-vehicle-borne equipment	47	(X)	4,670,680	(X)	4,582,021
38122 57	Nonmissile and space vehicle guidance equipment (ground, ship, or airborne command guidance systems, etc.)	10	(X)	748,136	(X)	695,094

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38122 —	Search and detection systems and navigation and guidance systems and equipment—Cont.					
38122 59	Missile and space vehicle systems and equipment—Cont. Electronic checkout, launching, and other missile and space vehicle support systems (ground, ship, and air)	23	(X)	440,798	(X)	587,782
	Navigation systems and equipment, navigational aids for aircraft, ship, and ground navigation (autopilots, beacons, transponders, collision warning devices, DECCA, DME, ILS, Doppler navigation systems, inertial navigation systems, optical/laser LORAN, radio compasses and direction finders, SHORAN, TACAN, VOR, VORTAC equipment, etc.): Airborne navigational systems:					
38122 61	Radio navigation receivers and displays, including OMNI, radio magnetic, glide slope/localizer, DME, etc.	23	(X)	407,247	(X)	428,303
38122 63	Airborne integrated data systems/flight recorders	11	(X)	247,612	(X)	315,255
38122 65	Distance measuring equipment (DME)	10	(X)	95,274	(X)	101,267
38122 67	Flight directors/situation display	7	(X)	340,301	(X)	388,875
38122 69	Heads-up display (HUD) systems	8	(X)	151,897	(X)	188,433
38122 71	Inertial navigation systems	7	(X)	422,808	(X)	504,711
38122 73	Proximity warning/collision avoidance equipment	6	(X)	201,206	(X)	195,517
38122 75	Complete automatic pilots	6	(X)	336,748	(X)	328,098
38122 77	Other airborne navigational systems	28	(X)	646,775	(X)	621,237
38122 78	Directional finder kits to be assembled by purchaser ...	-	-	-	-	-
38122 79	Surface (ship and ground) navigational systems AND	31				
38122 81	Underwater navigational systems	7	(X)	581,904	(X)	734,005
38122 83	Electronic checkout, monitoring, evaluation, and other electronic support equipment for navigational systems and equipment	42	(X)	906,775	(X)	992,632
38210 —	Laboratory apparatus and laboratory furniture	150	(X)	1,680,969	(X)	1,611,957
	Laboratory balances and scales:					
38210 11	Sensitivity of 5 centigrams or better AND	10				
38210 13	Sensitivity of less than 5 centigrams	9	860,131	66,037	692,531	54,575
38210 15	Laboratory furnaces and ovens	22	(X)	25,081	(X)	26,572
	Laboratory centrifuges:					
38210 17	Table-top type	12	21,525	32,476	19,030	27,170
	Floor type:					
38210 18	Refrigerated AND	3				
38210 20	Other	3	6,123	81,377	6,601	80,598
38210 27	Laboratory evaporation and distillation apparatus	13	(X)	17,685	(X)	17,001
38210 28	Laboratory sterilizers and autoclaves	10	(X)	74,092	(X)	61,058
38210 29	Laboratory burners and hot plates	10	(X)	9,485	(X)	9,222
38210 31	Laboratory granulators, mills, and other particle size reduction apparatus	7	(X)	2,966	(X)	2,825
38210 33	Laboratory dryers	10	(X)	10,283	(X)	7,572
38210 35	Laboratory blenders, mixers, shakers, dispensers, fraction collectors, and other liquid sample preparation apparatus	26	(X)	70,321	(X)	67,222
38210 36	Laboratory incubators	13	14,617	48,888	13,485	40,269
38210 37	Environmental test chambers	8	646	22,702	620	20,259
38210 38	Laboratory freezers	7	7,711	34,346	7,384	32,233
38210 42	Microtomes	3	1,145	7,892	1,155	6,804
38210 81	Laboratory furniture, including cabinets, cases, benches, tables, stools, reagent shelves, etc.	22	(X)	323,946	(X)	294,602
38210 88	Parts and components for laboratory furniture (sold separately)	6	(X)	2,543	(X)	2,334
38210 98	All other laboratory and scientific apparatus not specified above, including wet and dry baths, melting point apparatus, etc.; excluding analytical instruments ...	91	(X)	614,847	(X)	616,250
38210 99	Components, parts and accessories for laboratory and scientific apparatus (sold separately)	54	(X)	236,002	(X)	245,391

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38220 —	Controls for monitoring residential and commercial environments and appliance regulating controls	88	(X)	2,155,811	(X)	'1,982,188
	Automatic controls of the type principally used as components of air conditioning, refrigeration, and comfort heating, including pneumatic controls: Temperature responsive (thermostats):					
38220 21	Electric ¹	31	^a 33,760	^a 309,643	30,740	303,317
38220 22	Pneumatic ¹	7	^a 9,293	^a 72,465	'7,556	'60,667
38220 25	Pressure responsive (pressurestats) ¹	11	6,891	61,482	7,059	62,650
38220 30	Hydronic responsive ¹	6	1,885	35,688	1,750	29,987
38220 35	Humidity responsive (humidistats) ¹ AND	6				
38220 40	Light responsive ¹	3	5,332	20,828	5,309	20,499
38220 45	Electrostatic responsive ¹ AND	1				
38220 50	Liquid level ¹ AND	5				
38220 55	Defrost controls (except appliance regulators)	2	^b 269	9,981	^b 259	'9,370
38220 60	Igniters ¹ AND	9				
38220 65	Inherent motor protectors ¹	5	141,547	204,488	124,471	'180,920
38220 66	Microprocessor-based load programmers for buildings energy control ¹	10	393	'74,700	'289	60,385
	Computerized energy control systems for buildings:					
38220 67	Under 100 points (systems) ¹ AND	5				
38220 68	100 to 199 points (systems) ¹ AND	6				
38220 69	200 or more points ¹	9	(S)	330,944	(S)	'289,336
38220 71	Upgrades or additions to existing computerized energy control systems for buildings (value only) AND	2				
38220 74	Other	18	(X)	^b 301,946	(X)	'275,508
	Controls for major appliances such as domestic laundry and cooking appliances, refrigerators and freezers, vending machines, air conditioners, etc.:					
38220 75	Temperature responsive ¹	21	174,909	312,099	153,576	296,043
38220 77	Hydraulic and pneumatic ¹ AND	1				
38220 78	Pressure responsive ¹ AND	3				
38220 81	All other controls for appliances ¹	13	37,149	239,199	38,669	232,622
38220 98	Parts and components for controls monitoring residential and commercial environments and for appliance regulating controls (sold separately)	19	(X)	182,348	(X)	160,884
38230 —	Process control instruments	434	(X)	5,407,850	(X)	'5,229,609
	General purpose control system instruments (commonly called receiver-type), operating from standardized transmission signals (electrical types ac or dc milliampere, millivolt, or telemetering signals; pneumatic types, 3 to 15 and 3 to 27 psi signals):					
	Electronic systems - unified architecture type:					
38230 35	Controllers (recording, indicating, or blind)	41	326,872	180,850	'347,350	'187,440
38230 36	Recorders, with or without self-contained set-point stations	23	42,401	85,032	39,705	74,645
38230 37	Indicators, with or without self-contained set-point stations	27	70,240	28,539	82,784	'30,872
38230 38	Auxiliary stations and analog computing devices associated with the above, including manual loaders, auto-to-manual stations, ratio stations, adders, multipliers, integrators, etc.	15	(S)	24,427	(S)	'21,303
38230 07	Electronic systems - non-unified architecture type	58	(X)	1,021,385	(X)	953,873
38230 12	Industrial multi-function process computers	54	(X)	538,800	(X)	'449,424
	Pneumatic systems, including all system-type control, display and computing instruments actuated from standardized pneumatic transmission signals:					
38230 39	Controllers (recording, indicating, or blind)	17	88,373	25,172	'102,142	'28,095
38230 40	Recorders, with or without self-contained set-point stations AND	4				
38230 41	Indicators, with or without self-contained set-point stations	5	(S)	9,099	(S)	'7,459
38230 42	Auxiliary stations and analog computing devices associated with the above, including manual loaders, auto-to-manual stations, ratio stations, adders, multipliers, integrators, etc.	6	^b 72,978	^b 17,519	'64,988	17,099
38230 43	Receiver-type gauges, analog and digital	9	69,611	5,906	'75,594	'6,023

See footnotes at end of table.

Table 27. QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38230 —	Process control instruments—Cont. General purpose control system instruments and related equipment—Cont.					
38230 44	Annunciators, industrial; electromechanical and solid-state types	8	14,605	24,873	11,271	23,209
	Temperature measuring instruments, excluding general purpose receiver-type instruments:					
	Electrical and electronic measuring types (thermocouple, resistance temperature detector, radiation, optical, thermistor, and other electrical sensors):					
38230 45	Direct-deflecting types (controllers for all types of electrical temperature sensors)	6	(S)	4,944	(S)	4,748
38230 46	Direct-deflecting types (indicators and recorders for all types of electrical temperature sensors)	15	(S)	^b 7,406	(S)	7,175
38230 47	Electromechanical self-balancing types (electric or pneumatic controllers for all types of electrical temperature sensors) AND	4				
38230 48	Electromechanical self-balancing types (indicators, recorders, and integrators for all types of electrical temperature sensors)	5	(S)	30,844	(S)	32,054
38230 49	Electronic controllers for all types of electrical temperature sensors	26	^b 340,960	^b 85,777	330,689	86,416
38230 50	Digital indicators for all types of electrical temperature sensors, excluding data loggers	37	^b 74,621	^b 28,295	^f 69,336	^f 28,148
	Transmitters, producing standardized electric or pneumatic analog transmission signals for all types of electrical temperature sensors:					
38230 54	Electric	18	^b 122,813	^b 40,099	117,482	35,956
38230 55	Pneumatic	6	^b 667	^b 538	^f 688	^f 520
	Mechanical measuring types, filled systems (liquid filled, vapor pressure, gas filled, and mercury filled types):					
38230 52	Indicating or recording controllers	11	^b 249,319	^b 18,624	^f 242,107	^f 16,994
38230 53	Recorders, noncontrol	14	^b 17,141	^b 8,721	^f 23,048	10,622
38230 56	Indicators only, excluding indoor-outdoor and other household or appliance type thermometers	18	585,005	20,952	542,877	20,114
38230 57	Transmitters producing standardized electric or pneumatic analog transmission signals	10	21,278	7,941	28,709	11,404
	Primary temperature sensors, excluding aircraft types:					
38230 59	Thermocouples and thermocouple lead wire	57	(X)	207,636	(X)	203,315
38230 60	All other types (resistance temperature detectors, radiation and optical sensors, thermistors, etc.)	37	(X)	92,998	(X)	93,615
	Pressure (gauge, absolute vacuum) and draft measuring instruments, excluding general purpose receiver-type instruments:					
38230 61	Indicating or recording controllers	18	^b 80,092	29,767	^f 86,459	^f 32,657
38230 62	Recorders, noncontrol	9	3,507	2,200	3,674	2,475
	Indicators only, excluding receiver-type gauges:					
38230 20	3-inch diameter and over	23	2,402,819	101,591	2,438,191	97,189
38230 21	Under 3-inch diameter	17	19,451,254	68,100	^f 18,322,184	61,513
	Transmitters producing standardized analog transmission signals:					
38230 24	Transmitters producing standardized electronic analog transmission signals	33	3,579,729	190,220	4,096,902	212,972
38230 25	Transmitters producing standardized pneumatic analog transmission signals	5	^b 4,066	^b 3,677	5,787	4,536
	Flow and liquid level measuring instruments, excluding general purpose receiver-type instruments:					
	Differential pressure types:					
38230 65	Indicating or recording controllers	15	46,504	13,433	53,583	15,742
38230 66	Recorders, noncontrol; and indicators, noncontrol ...	16	72,466	35,673	80,646	38,824
	Transmitters producing standardized analog transmission signals:					
38230 27	Transmitters producing standardized electronic analog transmission signals	23	257,034	230,201	262,553	233,118

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38230 —	Process control instruments—Cont. Flow and liquid level measuring instruments, excluding general purpose receiver-type instruments—Cont. Differential pressure types—Cont. Transmitters producing standardized analog transmission symbols:—Cont. Transmitters producing standardized electronic analog transmission signals:—Cont.					
38230 28	Transmitters producing standardized pneumatic analog transmission signals	8	^b 14,109	^b 12,628	^f 10,128	10,376
38230 29	Primary pressure sensors (load cells, strain gauges, etc.)	9	59,009	36,447	^f 50,480	33,149
38230 68	Primary flow elements, including orifice plates, venturi tubes, flow tubes, flow nozzles, and pitot tubes	16	^b 317,678	39,486	292,680	35,851
	Electromagnetic flowmeters:					
38230 03	Primary device (magnetic flow tube)	11	31,382	55,100	^f 31,311	^f 53,120
38230 01	Secondary device (magnetic transmitter, recorder, indicator or controller which receives signal directly from primary device)	12	^a 37,988	^b 28,769	37,965	28,437
38230 04	Capacitance, ultrasonic, and other electronic types, including magnetic resonance, vortex-precession, and vortex-shedding type elements	25	146,678	118,893	160,521	^f 123,982
38230 71	Variable area-controlling, recording, indicating, and transmitting instruments and associated primary flow elements	14	1,113,148	80,362	^f 1,071,765	78,171
38230 72	Float and displacement (controlling, recording, indicating, and transmitting instruments and associated primary flow elements)	20	2,272,307	90,829	^f 1,967,548	81,738
38230 73	Turbine, mass-flow and other types (controlling, recording, indicating, and transmitting instruments and associated primary flow elements)	28	135,246	173,306	124,307	^f 158,802
38230 74	Humidity instruments (controlling, recording, indicating, and transmitting, and associated primary humidity elements, excluding home and general purpose type) ...	15	46,821	22,281	^f 44,794	21,201
	Continuous process instruments for on-stream gas and liquid analysis, including indicators, recorders, controllers, and analysis electrodes and cells; excluding laboratory analysis types:					
38230 75	Chromatographic analyzers	12	8,725	129,261	^f 8,339	^f 128,210
38230 76	Infrared analyzers	15	3,209	34,828	^f 3,889	^f 43,940
38230 77	Oxygen analyzers	18	25,248	47,170	^f 23,200	^f 43,232
38230 78	Other gas analyzers	32	(S)	^b 111,402	(S)	100,662
38230 79	Ph analyzers	17	^b 143,313	^b 44,200	^f 133,913	^f 45,000
38230 80	Other liquid analyzers	20	^b 77,507	^b 55,382	^f 70,676	53,100
	Instruments for all process variables not listed above (speed, weight, position, sequence, density, specific gravity, mechanical load, electrical load, millivolts):					
	Electrical and electronic measuring types:					
38230 06	Direct-deflecting type controllers, indicators and recorders	5	4,329	6,791	^f 3,503	^f 6,357
38230 08	Electromechanical self-balancing electric or pneumatic controllers, indicators, recorders integrators	4	^b 4,099	^b 2,561	^f 4,461	^f 2,718
38230 85	Digital indicators	9	10,807	21,378	^f 11,611	^f 23,866
38230 86	Transmitters producing standardized electric or pneumatic analog transmission signals	8	^b 12,839	^b 16,279	^b 11,707	^b 17,670
	Mechanical measuring types:					
38230 87	Indicating or recording controllers AND	2				
38230 88	Recorders, noncontrol	4	16,898	3,843	^f 20,394	4,804
38230 89	Indicators only	5	69,334	10,521	71,942	8,985
38230 90	Transmitters producing standardized electric or pneumatic analog transmission signals	13	180,942	42,878	196,746	47,027
	All other industrial process instruments:					
38230 91	Other temperature instruments	28	(X)	^a 121,555	(X)	^f 123,314
38230 92	Other flow and liquid level instruments	23	(X)	^a 76,541	(X)	^f 91,424
38230 93	Other continuous process instruments	32	(X)	^a 207,498	(X)	^f 179,068
38230 94	Other industrial type instruments	52	(X)	^a 300,975	(X)	^f 298,244

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38230 —	Process control instruments—Cont. Parts, supplies, accessories, other primary sensors, n.e.c., panelboards, and other equipment associated with process control instrumentation:					
38230 95	Primarily designed for temperature instruments	14	(X)	21,420	(X)	'21,054
38230 96	Primarily designed for flow and liquid level instruments	29	(X)	58,295	(X)	'60,894
38230 97	Primarily designed for continuous process instruments	31	(X)	^b 99,883	(X)	103,290
38230 99	Primarily designed for industrial type instruments	34	(X)	145,849	(X)	152,374
38242 —	Integrating and totalizing meters for gas and liquids	34	(X)	720,683	(X)	697,787
	Gas meters, consumption registering:					
	Diaphragm type: Positive displacements; aluminum, iron, and tin case:					
38242 22	Residential size (up to 400 ft ³ /hr of 0.64 specific gravity gas, at 0.5 inch water drop)	4	2,046,921	100,395	2,002,996	98,649
38242 24	Other sizes, including commercial and industrial	4	101,707	36,959	98,650	35,570
38242 26	Rotary type (all sizes) AND	2				
38242 28	Turbine type (all sizes)	8	36,979	45,205	'44,917	'52,496
38242 29	Other gas meters, consumption registering	-	-	-	-	-
	Liquid meters, positive displacement with registers and counters:					
	Water meters, consumption registering:					
38242 33	Small meters, up to and including 1 inch	10	3,692,017	142,713	3,686,159	134,622
38242 35	Intermediate meters, over 1 inch up to and including 2 inches	12	154,860	31,584	165,008	35,867
38242 37	Large meters, over 2 inches	10	56,622	56,134	'63,276	'64,287
38242 41	Liquid fuel dispensing meters, excluding service station dispensing pumps AND	6				
38242 98	Other liquid meters; industrial bulk plants, pipeline, batching, treatment facilities	13	689,054	196,892	565,756	170,317
38242 99	Parts, components, and accessories for gas and liquid meters (sold separately)	27	(X)	110,801	(X)	105,979
38243 —	Counting devices, excluding motor vehicle instruments	43	(X)	268,793	(X)	'226,335
38243 19	Tachometers, including speed indicators AND Other:	3				
38243 21	Mechanical input	10	3,544,868	20,284	3,730,166	20,697
38243 23	Electrical input	15	^b 2,845,739	^b 45,135	'3,008,622	'46,199
38243 25	Electronic input	16	430,522	47,327	'413,295	47,780
38243 27	Pneumatic input AND	2				
38243 29	Other counters, including event recorders AND	-				
38243 76	Taximeters AND	2				
38243 82	Parking meters, including parts and components sold separately AND	2				
38243 85	All other counting devices not specified above, including toll meters, fare collection equipment (systems), parking lot systems, etc., but excluding parking meters ..	6	(X)	150,473	(X)	'105,399
38243 88	Components and parts for counting devices (except parking meters, sold separately)	7	(X)	5,574	(X)	'6,260
38244 —	Motor vehicle instruments	28	(X)	1,394,555	(X)	1,329,496
38244 11	Speedometers (speedometers including odometers are classified as speedometers)	9	(X)	8,042	(X)	7,354
38244 21	Tachometers	11	(X)	43,132	(X)	45,798
38244 31	Odometers (speedometers including odometers are classified as speedometers)	5	(X)	1,244	(X)	1,053
38244 41	Fuel level gauges	7	(X)	2,552	(X)	3,556
38244 45	Water temperature gauges	8	(X)	6,930	(X)	6,095
38244 51	Ammeters	8	(X)	3,828	(X)	4,115
38244 55	Oil pressure gauges	6	(X)	2,374	(X)	2,929
38244 60	Instrument panels, including cluster modules	7	(X)	1,261,989	(X)	1,201,518
38244 99	Other motor vehicle instruments	20	(X)	64,464	(X)	'57,078
38251 —	Integrating instruments, electrical	22	(X)	426,035	(X)	'389,565
	ac watt-hour meters:					
	Single phase:					
38251 10	Detachable types AND	5				
38251 11	A-base types AND	1				
38251 14	Switchboard types	1	3,955,192	101,189	3,988,058	104,060
38251 15	Polyphase	8	345,793	47,728	338,099	49,193

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38251 —	Integrating instruments, electrical—Cont.					
38251 35	Demand meters (kW and kVA), combined watt-hour and demand meters (single phase and polyphase), and combined watt-hour and time switch meters.	9	^b 626,268	^b 124,753	522,477	111,748
38251 51	Other electrical integrating meters, including dc watt-hour meters, ampere-hour meters, and other miscellaneous integrating instruments not included in the above classifications.	9	(X)	72,533	(S)	^c 47,635
38251 61	Parts and accessories for electric integrating meters, including meter mountings and registers (sold separately)	10	(X)	79,832	(X)	76,929
38252 —	Test equipment for testing electrical, radio and communication circuits, and motors	336	(X)	6,305,675	(X)	^c 6,524,451
	Voltage, current, and resistance measuring equipment (except multimeters):					
	Electronic:					
38252 20	Digital	24	(X)	200,285	(X)	^c 195,865
38252 21	Analog	24	(X)	24,016	(X)	23,634
38252 22	Electrical, excluding panel meters.	18	(X)	35,915	(X)	^c 33,593
	Multimeters:					
	Electronic:					
38252 28	Digital	16	(X)	125,923	(X)	116,927
38252 29	Analog AND	6				
38252 30	Electrical	5	(X)	16,063	(X)	15,870
	Power and energy measuring equipment:					
	Electronic:					
38252 25	Analog	14	(X)	9,223	(X)	9,332
38252 26	Digital	18	(X)	76,556	(X)	75,430
38252 27	Electrical power measuring equipment, excluding electrical integrating instruments (sold separately)	9	(X)	8,526	(X)	^c 8,891
	Frequency counters, timers, and other frequency and time measuring equipment, excluding standards:					
38252 31	Universal counters with time interval measuring capability.	9	(X)	14,414	(X)	20,620
38252 36	Stroboscopes AND	3				
38252 32	Microwave counters (capable of operating over 1,300 MHz) AND	4				
38252 33	Other frequency counters	7	(X)	46,176	(X)	^c 45,440
38252 34	Frequency meters AND	7				
38252 39	Other frequency counting and time measuring equipment.	8	(X)	32,347	(X)	40,973
	Waveform measuring and/or analyzing equipment:					
	Oscilloscopes and plug-in accessories:					
38252 12	Under 10 MHz AND	6				
38252 10	10 MHz up to 99.9 MHz AND	4				
38252 11	100 MHz and over	3	(X)	389,143	(X)	^c 430,767
38252 14	Oscillographs	1	(X)	(D)	(X)	(D)
	Spectrum analyzers:					
38252 15	Capable of operating above 100 kHz.	4	(X)	⁽³⁾	(X)	^c 90,057
38252 17	Other spectrum analyzers	3	(X)	³ 89,807	(X)	678
38252 16	Other waveform measuring and analyzing equipment. ...	21	(X)	239,499	(X)	^c 246,894
	Signal generating equipment:					
38252 56	Audio	11	(X)	9,625	(X)	10,121
38252 58	RF (over 20 Hz to 890 MHz)	18	(X)	243,784	(X)	^c 232,994
38252 59	Microwave (890 MHz and above)	15	(X)	131,543	(X)	^c 139,547
	Field strength and intensity measuring equipment, including RFI measuring equipment:					
38252 91	Electronic	12	(X)	229,637	(X)	247,395
38252 92	Electrical field measuring equipment	3	(X)	(D)	(X)	(D)
	Impedance and standing wave ratio measuring equipment (transfer function measuring equipment):					
38252 93	Electronic impedance and related measuring equipment.	10	(X)	21,598	(X)	^c 24,083
38252 94	Standing wave measuring equipment (slotted lines, sliding shorts, reflectometers, and other SWR equipment)	7	(X)	18,974	(X)	16,343
38252 97	X-Y plotters (recorders), electronic	4	(X)	^a 6,982	(X)	6,115

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38252 —	Test equipment for testing electrical, radio and communication circuits, and motors—Cont.					
	Automatic test and measuring equipment:					
38252 44	Combination and/or group test sets.....	38	(X)	509,841	(X)	561,922
	Component part test sets:					
38252 45	Electron tube test equipment.....	3	(X)	(^a)	(X)	1,331
	Semiconductor component test equipment:					
38252 61	Memory.....	15	(X)	103,739	(X)	90,831
38252 63	Linear.....	13	(X)	^b 169,031	(X)	144,009
38252 65	Microprocessor.....	9	(X)	^b 179,711	(X)	184,929
38252 67	Other semiconductor component test equipment ..	39	(X)	421,677	(X)	^c 433,131
38252 69	Circuit board loaded test equipment.....	19	(X)	234,832	(X)	264,885
38252 47	Other component part test sets and equipment.....	19	(X)	^d 192,657	(X)	^e 178,323
38252 48	Equipment and subassembly test equipment n.e.c., including disc drive testers, power supply testers, etc.....	28	(X)	257,397	(X)	280,190
	Standards and calibration equipment for test measuring equipment, including laboratory types (metered benchtop, rack mountable, or plug-in equipment):					
38252 72	Electronic.....	29	(X)	128,410	(X)	146,789
38252 74	Electrical.....	10	(X)	55,751	(X)	43,939
	Analyzers for testing characteristics of internal-combustion engines, excluding aircraft:					
38252 37	Portable.....	8	(X)	165,525	(X)	178,829
38252 38	Other.....	7	(X)	119,736	(X)	162,815
	Communications test equipment n.e.c.:					
38252 81	Network analyzers.....	18	(X)	311,575	(X)	^f 299,604
38252 83	Cable backplane and other continuity testers.....	9	(X)	^b 35,123	(X)	^f 34,104
38252 85	Fiber optics test equipment (OTDR, optical S/N meters, etc.).....	8	(X)	55,376	(X)	^f 51,732
38252 87	Other communications test, monitoring, and control equipment (except microwave).....	32	(X)	268,352	(X)	^f 268,650
38252 52	Microwave test equipment n.e.c., (1,300 MHz and above).....	15	(X)	31,198	(X)	^f 33,290
	Logic test, development, and analysis equipment:					
38252 01	Logic analyzers, and similar logic state, timing, and signature analyzers AND	4				
38252 03	Microprocessor development systems.....	8	(X)	181,512	(X)	221,030
38252 05	Pulse, function, and data generators and similar metered frequency synthesizers.....	11	(X)	85,601	(X)	^f 88,994
38252 07	Other field service test and measurement equipment:					
	Logic probes, clips, comparators, pulsers, and current tracers AND	8				
38252 09	Other field service equipment specifically designed for other troubleshooting digital circuits.....	1	(X)	8,880	(X)	^f 10,660
38252 02	Other measuring and checking instruments for testing electrical, radio and communication circuits, and motors.....	34	(X)	390,318	(X)	373,937
	Other analyzing instruments for checking electrical quantities:					
	With a recording device AND	1				
38252 06	Other.....	12	(X)	^b 115,778	(X)	116,641
38252 99	Parts and components for test equipment for testing electrical, radio and communication circuits, and motors (sold separately).....	45	(X)	306,923	(X)	316,244
38253 —	Instruments to measure electricity.....	87	(X)	548,122	(X)	584,001
	Electrical indicating instruments, including both digital types and those where a pointer is made to move over a calibrated scale, such movement being effected by the action of the electrical current and/or voltage:					
	Panel type instruments, including all aircraft types and all miniaturized instruments plus or minus 3 percent, and rectifier instruments which can be enclosed in a case suitable for mounting on a panel and are an end product. Excludes all instruments for use on motor vehicles which are capable of accuracies of plus or minus 2-percent of full scale indication:					

See footnotes at end of table.

Table 27. QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38253 —	Instruments to measure electricity—Cont. Electrical indicating instruments—Cont. Panel type instruments—Cont.					
38253 08	Digital panel meters (DPM) between 0.05 percent and 1 percent, plus or minus 1-digit accuracy, excluding precision DVM's and electronic counters	22	437,472	49,490	'525,505	53,785
38253 10	Analog solid state panel meters (generally of plus or minus 2-percent accuracy) with LED, LCD, or neon gas discharge display	6	^b 39,366	^b 5,320	'35,787	'5,287
38253 12	Panel types other than ruggedized or sealed (generally of 2-percent accuracy): ac, including moving iron vane and dynamometer types	10	296,071	6,398	'252,302	'5,646
38253 13	dc, including rectifier and self-contained thermocouple types	13	1,274,967	25,756	'1,452,078	'27,714
38253 11	Panel types ruggedized or sealed (generally of 2-percent accuracy)	13	(S)	8,380	(S)	10,298
38253 16	Panel types with control or signal initiating means, including instrument relays: Indicating AND	3				
38253 17	Nonindicating	4	42,930	4,540	'36,935	4,222
38253 19	All other panel type instruments, including ammeters and voltmeters for motor vehicles	14	4,699,728	40,566	'4,172,219	36,992
38253 23	Switchboard instruments which are generally of 1-percent accuracy: ac, including moving iron vane and dynamometer types AND	3				
38253 25	dc, including rectifier and thermocouple types	5	44,193	4,760	53,236	5,577
38253 27	Elapsed time meters (with and without reset)	8	730,810	21,291	'712,927	'23,609
38253 29	Portable instruments which are generally capable of accuracies within plus or minus 2 percent of full scale indication, and can be enclosed in a case so that they can be moved and used at various locations, and which are an end product: Portable types (accuracy rating 0.11 percent through 0.50 percent)	5	(S)	729	(S)	'899
38253 30	Portable type (accuracy rating 0.51 percent through 2 percent)	7	^a 5,317	^a 623	'5,567	'616
38253 35	Laboratory portable instruments with accuracies within plus or minus 1 percent up to 1/10 percent of full scale and better (all case sizes) AND	1				
38253 37	Volt-ohm millimeter (VOM), accuracy 0.10 percent through 5 percent AND	2				
38253 45	Other electrical indicating instruments (except self-balancing types)	7	^b 336,291	^b 26,346	366,146	28,225
38253 50	Electrical recording instruments (portable and for panel mounting): Direct deflecting (direct acting) (except temperature calibrated instruments)	4	^b 34,273	^a 7,352	42,397	'7,928
38253 63	Oscillographic recorders: Pen or stylus type AND	5				
38253 65	Light beam type	2	41,317	34,271	'44,656	'34,558
38253 72	Other electrical recording instruments	20	(X)	227,968	(X)	'254,174
38253 74	Parts and accessories for indicating and recording instruments: Transducers for volts, amperes, watts, vars, frequency, temperature and power factor	16	(X)	42,864	(X)	46,115
38253 75	Tachometer generators (except aerospace types)	6	(X)	14,663	(X)	11,989
38253 76	Other including instrument shunts	15	(X)	26,805	(X)	26,367
38260 —	Analytical and scientific instruments (except optical)	219	(X)	4,651,135	(X)	4,519,133
38260 01	Electrochemical instruments: Ph electrodes and meters	20	(X)	44,487	(X)	40,016
38260 03	Ion selective electrodes and meters	11	(X)	^a 31,128	(X)	33,822
38260 04	Electrophoresis instruments	15	(X)	85,259	(X)	74,856
38260 05	Other (except process type), including photometers	10	(X)	^a 41,905	(X)	'61,801

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38260 —	Analytical and scientific instruments (except optical)—Cont.					
	Chromatographic instruments:					
38260 07	Gas	10	21,879	188,709	23,744	209,500
38260 08	Liquid	19	120,363	456,738	'104,246	427,320
38260 09	Other, including paper, gel, thin layer	4	(X)	(D)	(X)	(D)
	Spectrophotometric instruments:					
38260 24	Atomic absorption	4	(X)	(D)	(X)	(D)
38260 25	Optical emission, including spark, arc, and glow, spectrographs, all other (except ICP)	6	(X)	14,212	(X)	14,540
38260 27	Optical emission, including laser excited source, including laser microprobe source emission, laser source Raman and laser microprobe source Raman spectrometers AND	3				
38260 28	Optical emission with inductively coupled plasma, ICP ..	3	(X)	^a 47,772	(X)	'46,283
38260 30	Infrared, including Fourier transfer methods	14	(X)	^a 181,188	(X)	'185,699
38260 31	Ultraviolet, visible and colorimeters	19	(X)	117,554	(X)	'112,766
38260 33	Fluorescent instruments, including fluorometers (except chemicals)	10	(X)	50,345	(X)	'41,480
38260 35	Color measuring devices	10	(X)	94,869	(X)	88,891
38260 36	Other, including vacuum ultraviolet, Raman, light scattering reflectors, helium glow, and light measuring	12	(X)	29,533	(X)	'26,725
38260 37	Thermal analysis instruments, including thermogravimetric analyzers (TGA), quantitative thermal analyzers (QTA) and differential thermal analyzers (DTA)	10	(X)	^b 89,411	(X)	77,031
38260 39	Microscopes, scanning type, including electron and proton	4	202	39,534	'191	'30,250
38260 38	Nuclear magnetic resonance spectrometers, including electron paramagnetic spin types (EP) AND	3				
38260 53	Particle beam excitation instruments, including electron microprobes, augers, energy ion spectroscopes, secondary ion mass spectrometers (SIMS), ion microprobes	3	^a 432	^a 117,168	391	116,521
38260 55	Photon excitation analyzers, including X-ray fluorescence - simultaneous, X-ray fluorescence - sequential, X-ray fluorescence - sequential with diffraction, X-ray fluorescence - diffraction; X-ray diffraction; and energy dispersive systems (EDS)	10	^a 1,812	^b 63,028	'1,784	'57,614
38260 61	Mass spectroscopy instrumentation	13	(X)	250,311	(X)	218,402
	Clinical laboratory instrumentation, including instruments used in the clinical laboratory for measuring, analyzing, and processing clinical specimens	(NA)	(X)	877,771	(X)	880,821
38260 71	Chemistry (measure and identify substances, e.g. metabolites, enzymes, and drugs)	13	19,053	422,636	'18,824	445,331
38260 72	Hematology (measure and identify substances or cells contained in blood or substances influencing the development and clotting of blood, e.g., cell counting coagulation factors)	6	6,258	261,249	'5,905	239,750
38260 73	Microbiology (enumerate or identify pathogenic organisms or measure their susceptibility to anti-microbial agents)	3	(^c)	(^c)	139	626
38260 74	Histology (process tissue and cells, e.g., tissue processors, cell stainers)	3	⁵ 306	⁵ 2,497	(^c)	(^c)
38260 75	Blood bank and immunology (process blood and specimens for testing; measure and identify, using immunoassay, substances in clinical specimens)	4	7,805	115,761	⁶ '8,755	⁶ '122,112
38260 76	Other clinical laboratory instrumentation not specified above	8	(X)	^b 75,628	(X)	73,002
38260 78	Organic elemental analysis instruments, including carbon, hydrogen, nitrogen, oxygen, and sulphur	17	^a 25,992	^a 87,782	(^c)	(^c)
38260 92	Amino acid, protein and/or peptide analyzers, including chromatographic type	5	235	10,448	'27,574	'107,775
38260 93	Gas detectors	16	31,418	56,375	'27,730	'51,918

See footnotes at end of table.

Table 27. QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38260 — 38260 94	Analytical and scientific instruments (except optical)—Cont. Other analytical and scientific instruments, n.e.c., including molecular weight, monochrometers (analytical type), nephelometers (except meteorological), osmometers, particle size analyzers, photo multipliers, surface area analyzers, turbidometers, and breatholyzers	89	(X)	588,358	(X)	'582,325
38260 98	Parts, components, and accessories for analytical and scientific instruments (sold separately), including photo tubes, thermal conductivity sensors, thermopiles, etc., which are not specifically provided for in product classes 38272, "Binoculars and astronomical instruments," or 38273, "Other optical instruments and lenses"	92	(X)	1,022,169	(X)	966,429
38271 — 38271 01	Sighting, tracking, and fire control equipment, optical type .. Made from lenses, prisms, etc., produced in the same plant.	37	(X)	492,536	(X)	547,181
38271 02	Made from purchased lenses, prisms, etc.	15	(X)	152,811	(X)	'183,821
38271 99	Parts and accessories	19	(X)	305,676	(X)	323,552
38274 — 38274 01	Optical instruments and lenses ^a	9	(X)	34,049	(X)	'39,808
38274 03	Binoculars, prismatic and nonprismatic, terrestrial and celestial telescopes	149	(X)	1,342,156	(X)	1,292,334
38274 09	Other astronomical instruments, excluding radio astronomy.	9	(X)	56,147	(X)	'60,412
38274 12	Parts and accessories, including mountings, for binoculars, optical telescopes and other astronomical equipment.	4	(X)	12,046	(X)	9,664
38274 15	Optical test and inspection equipment, including standard sources, modulators, optical comparators, interferometers (except optical microscopes)	7	(X)	2,616	(X)	2,925
38274 17	Optical microscopes.	32	(X)	^a 160,048	(X)	151,159
38274 21	Optical components: Filters, including parts and accessories thereof	6	(X)	^(b)	(X)	^(b)
38274 22	Lenses, except ophthalmic focus lenses: Unmounted lenses	24	(X)	64,822	(X)	'59,643
38274 23	Mounted lenses: Photographic lenses	32	(X)	91,039	(X)	'87,968
38274 29	Other mounted lenses	5	(¹⁰)	(¹⁰)	(X)	'9,041
38274 59	Other (prisms, mirrors, etc.)	17	(X)	120,267	(X)	95,319
38274 39	Other optical instruments, including optical alignment and display instruments; excluding analytical instruments and binoculars and astronomical instruments listed above and sighting and fire control equipment.	42	(X)	85,858	(X)	104,347
38274 49	Parts and accessories for other optical microscopes	7	(X)	468,181	(X)	'463,920
38291 —	Parts and accessories for other optical instruments	16	(X)	^a 235,724	(X)	^a 201,307
38291 45	Aircraft engine instruments (except flight)	44	(X)	^a 590,489	(X)	'682,017
38291 46	Temperature sensors, transmitters, and displays.	23	(X)	^a 130,300	(X)	144,197
38291 47	Pressure ratio sensors, displays, and controls	7	(X)	41,168	(X)	'44,194
38291 58	Pressure and vacuum sensors, transmitters, and displays.	11	(X)	26,179	(X)	'36,253
38291 60	Fuel and oil flow rate sensors, transmitters, and displays, including mixture controls.	8	(X)	45,114	(X)	55,204
38291 62	Fuel and oil quantity sensors, transmitters, and displays, including densitometers.	14	(X)	107,364	(X)	'107,149
38291 98	Tachometer generators and indicators.	12	(X)	25,248	(X)	36,892
38291 99	All other not specified above	16	(X)	208,091	(X)	'246,684
	Parts and components for aircraft engine instruments (except flight (sold separately))	7	(X)	7,025	(X)	'11,444

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38292 —	Physical properties testing and inspection equipment and kinematic testing and measuring equipment	151	(X)	1,105,895	(X)	'1,087,196
	Physical properties testing equipment including hardness, tensile, stress, strain, abrasion, strength, torsion, wear, and similar testing equipment; including components and parts sold separately:					
38292 32	For testing of metals	23	(X)	219,941	(X)	217,085
38292 34	Other	49	(X)	255,209	(X)	264,044
38292 39	Parts for physical properties testing equipment (sold separately)	22	(X)	23,730	(X)	'21,016
	Physical properties inspection equipment, including flaw detection, thickness measuring, and similar inspection equipment; including components and parts sold separately:					
38292 52	For testing of metals	21	(X)	145,726	(X)	133,834
38292 54	Measuring and checking flow of fluids	12	(X)	41,769	(X)	'34,462
38292 56	Other	43	(X)	218,982	(X)	'212,052
38292 58	Parts for physical properties inspection equipment (sold separately)	20	(X)	33,356	(X)	'36,020
	Kinematic testing and measuring equipment, including vibration, acceleration, and other motion testing equipment:					
38292 94	For testing of metals	2	(X)	(¹¹)	(X)	(¹¹)
38292 95	Other	29	(X)	164,818	(X)	166,435
38292 98	Parts for kinematic testing and measuring equipment (sold separately)	7	(X)	2,364	(X)	2,248
38294 —	Nuclear radiation detection and monitoring instruments.....	52	(X)	581,405	(X)	570,444
38294 02	Radiation detecting elements, including ion chambers....	16	123,806	82,362	102,910	'71,407
38294 04	Solid state detectors	7	15,063	*40,453	11,785	36,120
38294 06	Nuclear monitoring instruments, including environmental, personal dosimetry, and medical monitors, both stationary and portable types AND	14				
38294 07	Medical and biological counting systems for In Vivo counting	1	(X)	110,269	(X)	114,445
38440 06	Nuclear medicine equipment (all equipment used for nuclear In Vivo studies) ¹²	5	757	138,096	699	101,772
38294 09	Sample and flow counting systems, manual and automatic	9	(X)	36,587	(X)	38,163
38294 19	Scalers	5	(¹³)	(¹³)	(X)	(¹³)
38294 21	Special amplifiers for nuclear applications.....	4	10,981	8,342	9,443	7,157
	Pulse analyzers, including nuclear spectrometers:					
38294 22	Single channel pulse height analyzers	6	1,173	3,840	1,117	4,320
38294 23	Multichannel pulse height analyzers	4	996	14,951	752	14,118
38294 25	Count rate meters.....	8	2,446	1,982	3,344	2,857
38294 29	Measurement and control devices using beta, gamma, or neutron gauge technology	9	(X)	103,971	(X)	99,262
38294 28	Input-output accessories for multichannel analyzers AND	2				
38294 30	Nuclear power supplies	7	(X)	13,004	(X)	8,206
38294 32	Neutron and photon activation analysis systems AND	4				
38294 34	Nuclear instrument modules, n.e.c.....	10	(X)	52,048	(X)	51,561
38294 39	Other nuclear radiation detection and monitoring instruments.....	12	(X)	88,002	(X)	89,883
38294 98	Parts and components for nuclear radiation detection and monitoring instruments (sold separately)	10	(X)	25,594	(X)	'32,945
38295 —	Commercial, geophysical, meteorological, and general purpose instruments.....	149	(X)	1,352,565	(X)	1,335,127
38295 20	Barometers and barographs, aneroid and mercurial types, including recorders, wall, pendant, meteorological, hygro-thermographs, barometer-thermometer-humidity combinations	15	(X)	7,686	(X)	4,953
38295 21	Hydrometers, glass, all types, including thermo-hydrometers ¹	6	^b 230	^a 2,223	'257	'2,453

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
38295 —	Commercial, geophysical, meteorological, and general purpose instruments—Cont.					
	Liquid-in-glass thermometers:					
38295 22	Engraved (etched) stem, thermoregulators, deep-sea reversing, laboratory, encased glass, ASTM standards, pocket case, max-min registering (except clinical thermometers) ¹	15	(X)	^b 9,413	(X)	10,327
38295 23	Threaded and flanged types, fixed and adjustable angle, in-line and duct installations, for process, food, air conditioning, and refrigeration installations ¹	11	^b 359	^b 7,075	353	7,220
38295 24	Household and commercial thermometers such as wall, outdoor, domestic science, cupcase, filled systems, indoor-outdoor ¹ AND	11				
38295 34	Clinical (fever) thermometers, including digital ¹	2	19,180	18,402	^c 21,998	^c 20,679
	Bimetal thermometers:					
38295 25	Threaded and flanged types, for pipeline and duct installations, including general and pocket test ¹	19	974	21,913	^c 956	20,218
38295 26	Domestic science, commercial general test, indoor, outdoor, desk models, oven, refrigerator ¹	11	5,373	16,515	^c 6,049	17,618
38295 28	Humidity indicating and recording instruments such as bi-hygrosopic and hygrosopic element, indicators, psychrometers, wet and dry bulb, hygrographs, indicating hygrometers	12	(X)	8,394	(X)	6,982
38295 29	Other thermometers (infrared, meteorological, commercial and industrial)	11	(X)	29,568	(X)	^c 25,494
38295 51	Meteorological electronics equipment and radio astronomy equipment (automatic weather stations and weather tracking equipment, ceilometers, transitometers, space satellite meteorological systems, and specialized meteorological telemetering equipment)	19	(X)	249,563	(X)	306,616
38295 31	Other meteorological instruments, including speed and direction instruments, rain gauges, thermographs, and parts (sold separately)	18	(X)	46,606	(X)	^b 54,174
38295 40	Seismic instruments	12	(X)	^a 162,815	(X)	149,561
38295 45	All other geophysical instruments and equipment	21	(X)	^a 236,534	(X)	^c 259,911
38295 33	Other commercial and industrial instruments (except aircraft), including compasses, altimeters, test equipment for hydraulic and pneumatic systems and controls, and environmental gas detectors (sold separately)	51	(X)	532,772	(X)	446,723
38295 39	Parts and accessories for meteorological and commercial and industrial instruments	12	(X)	3,086	(X)	^c 2,198
38296 —	Surveying and drafting instruments and associated equipment	35	(X)	265,654	(X)	234,648
38296 11	Surveying instruments, including alidades, transits, plumb bobs, sextants, theodolites, surveyors, compasses, surveyors levels, tapes, etc. AND	21				
38296 19	Parts and components for surveying instruments (sold separately)	6	(X)	176,674	(X)	155,946
38296 21	Drafting instruments and machines, manual and automatic, drafting tables, plotting instruments, slide rules, T-squares, drafting templates, rules, etc.	17	(X)	^a 88,980	(X)	78,702
38296 29	Parts and components for drafting instruments and machines (sold separately) AND	2				
38296 31	Photogrammetric and geodetic equipment, excluding cameras AND	2				
38296 39	Parts and components for photogrammetric and geodetic equipment (sold separately)	2	(X)	8,305	(X)	9,059

See footnotes at end of table.

Table 27. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
50650 00	Nonmanufacturing revenues of this establishment:					
	Supplies and accessories shipped without further manufacture, for use with selected instruments	5	(X)	(S)	(X)	(S)
73720 00	Software services, including receipts from all nonhardware related activities	7	(X)	(S)	(X)	(S)
73732 00	Systems integration revenues, including configuration, installation and site preparation, and custom programming	5	(X)	(S)	(X)	(S)
99980 49	Research and development, testing and evaluation of systems and components	3	(X)	(S)	(X)	(S)
99980 59	Other nonmanufacturing revenues	13	(X)	(S)	(X)	(S)

Note: The percent of estimation of each item is indicated as follows: ^a10 to 25 percent of this item has been estimated. ^bOver 26 percent of this item has been estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. n.e.c. Not elsewhere classified. Revised by 5 percent or more from previously published figures. (S) Data withheld; does not meet publication standards. (X) Not applicable.

¹Quantity in thousands of units.

²Prior to 1989, data for product code 38122 were published in the Current Industrial Report MA36P, *Communication Equipment, Including Telephone, Telegraph and Other Electronic Systems and Equipment*.

³Data for product code 38252 15, "Spectrum analyzers capable of operating above 100 kHz," are combined with product code 38252 17, "Other spectrum analyzers," to avoid disclosing figures for individual companies.

⁴Data for product code 38252 45, "Electron test tube equipment," are included with product code 38252 47, "Other component part test sets and equipment," to avoid disclosing figures for individual companies.

⁵Data for product code 38260 73, "Microbiology (enumerate or identify pathogenic organisms or measure their susceptibility to anti-microbial agents)," are combined with product code 38260 74, "Histology (process tissue and cells, e.g., tissue processors, cell stainers)," to avoid disclosing figures for individual companies.

⁶Data for product code 38260 74, "Histology (process tissue and cells, e.g., processors, cell)," are included with product code 38260 75, "Blood bank and immunology (process blood and specimens for testing; measure and identify, using immunoassay, substances in clinical specimens)," to avoid disclosing figures for individual companies.

⁷Data for product code 38260 78, "Organic elemental analysis instruments, including carbon, hydrogen, nitrogen, oxygen, and sulphur," are combined with product code 38260 92, "Amino acid, protein and/or peptide analyzers, including chromatographic type," to avoid disclosing figures for individual companies.

⁸Beginning in 1992, product codes 38272, "Binoculars and astronomical instruments," and 38273, "Other optical instruments and lenses (except sighting, tracking, and fire control)," have been combined into product code 38274, "Optical instruments and lenses."

⁹Data for product code 38273 15, "Optical microscopes," are included with product code 38273 39, "Parts and accessories for other optical microscopes," to avoid disclosing figures for individual companies.

¹⁰Data for product code 38274 22, "Photographic lenses," are combined with product code 38274 23, "Other mounted lenses," to avoid disclosing figures for individual companies.

¹¹Data for product code 38292 94, "Kinematic testing and measuring equipment, including vibration, acceleration, and other motion testing equipment, for testing of metals," are combined with product code 38292 95, "Other kinematic testing and measuring equipment, including vibration, acceleration, and other motion testing equipment."

¹²From Current Industrial Report MA38R, *Electromedical Equipment and Irradiation Equipment, Including X-ray*.

¹³Data for product code 38294 19, "Scalers," are combined with product code 38294 21, "Special amplifiers for nuclear applications," to avoid disclosing figures for individual companies.

Table 28. **SHIPMENTS, IMPORTS AND EXPORTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS:**
1992

[Value in thousands of dollars]

Product code	Product description	Manufacturers' shipments (value of f.o.b. plant)	Exports of domestic merchandise (value at port) ¹	Imports for consumption (value) ²
34918 01-09	Pneumatic actuated automatic valves.....	501,016	31,966	15,113
34918 11-14, 16-18, 21, 23	All other control valves, including electric and electrohydraulic.	261,100	187,862	298,747
34918 25, 30, 35, 41, 45, 48	Self-generating power actuated regulator valves	785,836	51,537	146,163
34919 56, 58-59, 61, 79	Solenoid-operated valves (except nuclear and fluid transfer) ..	404,201	25,447	286,718
38121 01	Compasses (magnetic and gyroscopic)	325,727	57,311	15,422
38121 08, 10, 12-13, 15, 17-18, 20-21, 23, 25-26, 28, 61, 63-64, 77, 80, 85, 89, 38122 11, 13, 15	Search, detection, aeronautical, nautical, and navigational and guidance systems, equipment, and instruments, n.e.c. (except aircraft engine instruments).....	5,037,777	680,991	314,055
38122 17, 19, 21, 23, 25, 27, 29, 31, 33	Radar systems and equipment.....	7,157,718	315,133	105,140
38122 61	Radio navigational aid receivers and displays.....	407,247	184,103	85,859
38122 75	Automatic pilots.....	336,748	92,291	32,967
38122 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 63, 65, 67, 69, 71, 73, 75, 77-79, 81, 83	Sonar search, detection, tracking, and communication systems and equipment, including ASW (sonar telephone, communication equipment, depth finding, fire control, fusing guidance, hydrophones, mapping, sonabuys, navigation, sonar fish finders, sonar range instrumentation, and other).....	18,904,110	191,462	53,854
38220 21-22, 75	Temperature responsive automatic controls (thermostats).....	694,207	76,244	144,518
38220 25, 78	Pressure responsive automatic controls (pressurstats and manostats)	(³)	15,169	11,295
38220 30, 77	Hydraulic and pneumatic automatic controls.....	(³)	25,412	22,456
38220 35, 40, 45, 50, 55, 60, 65-69, 71, 74, 81	Automatic controls, n.e.c. ³	1,773,703	412,166	364,740
38220 98	Parts and components for automatic controls (sold separately).....	182,348	579,051	203,329
38230 00	Process control instruments	5,407,850	331,200	299,941
38242 22, 24, 26, 28, 29	Gas meters, consumption registering (except parts)	182,559	22,526	5,238
38242 33, 35, 37, 41, 98	Liquid meters (except parts)	427,323	36,751	3,422
38242 99	Parts, components, and accessories for gas and liquid meters (sold separately)	110,801	38,674	17,290
38243 82	Parking meters, including parts and components.....	(⁴)	4,626	-
38243 19, 21, 23, 25, 27, 29, 76, 85, 38244 00, 38253 00, 38291 00	Counting devices, n.e.c., including taxi meters and parts, and motor vehicle instruments ⁴	2,158,569	83,708	271,846
38243 88, 38291 99	Components and parts for counting devices (except parking meters, sold separately).....	12,599	22,547	19,362

See footnotes at end of table.

Table 28. **SHIPMENTS, IMPORTS AND EXPORTS OF SELECTED INSTRUMENTS AND RELATED PRODUCTS:**
1992—Continued

[Value in thousands of dollars]

Product code	Product description	Manufacturers' shipments (value of f.o.b. plant)	Exports of domestic merchandise (value at port) ¹	Imports for consumption (value) ²
38251 00	Electricity meters	426,035	18,787	3,645
38252 20-22	Voltage, current, and resistance measuring equipment (except multimeters)	260,216	208,461	69,112
38252 28-30	Multimeters	141,986	82,004	51,023
38252 25-26, 77	Power and energy testing equipment	(NA)	287,688	102,815
38252 36	Stroboscopes	(NA)	214	945
38252 37-38	Analyzers for testing characteristics of internal-combustion engines (except aircraft)	285,261	155,243	40,797
38252 56, 58, 59	Signal generating equipment	384,952	117,106	49,925
38252 01-07, 10-12, 14-17, 31-34, 39, 44-45, 47-48, 52, 61, 63, 65, 67, 69, 72, 74, 81, 83, 85, 87, 91-94, 97, 38253 00	Test equipment for testing electrical, radio and communication circuits, and motors, n.e.c.	5,469,961	904,152	78,841
38252 99	Parts and components for test equipment for testing electrical, radio and communication circuits and motors	306,923	380,069	137,598
38210 00, 38260 00	Laboratory, analytical, and scientific instruments	6,332,104	989,702	393,146
38271 00	Sighting, tracking, and fire-control equipment, optical type.	492,536	51,844	61,069
38274 00	Optical instruments and lenses.	1,342,156	197,271	206,443
38274 15	Microscopes, optical	(NA)	30,340	156,154
38292 00	Physical properties testing and inspection equipment and kinematic testing and measuring equipment	1,105,895	424,514	60,532
38294 00	Nuclear radiation detection and monitoring instruments and equipment	581,405	226,744	36,727
38295 34	Liquid-in-glass thermometers, clinical	(⁵)	2,017	5,360
38295 22-24	Liquid-in-glass thermometers, n.e.c. ⁵	34,890	11,183	6,165
38295 25-26, 29	Thermometers (except liquid-in-glass type)	67,996	(NA)	59,510
38295 45	Geophysical instruments and equipment	236,534	213,875	8,687
38295 40	Seismic instruments	162,815	5,552	3,275
38295 20, 28, 31, 51	Commercial, geophysical, meteorological, and general purpose instruments, n.e.c.	312,249	150,448	65,605
38296 11, 19	Surveying instruments (except photogrammetrical and geodetic equipment)	176,674	72,055	66,211
38296 31, 39	Photogrammetrical and geodetic equipment (except cameras) AND			
38296 29	Parts and components for drafting instruments and machines .	8,305	10,890	12,652
38296 29	Drafting instruments and machines, manual and automatic	88,980	16,154	97,568

- Represents zero. (NA) Not available.

¹Source: Bureau of the Census report, EM 545, *U.S. Exports*.²Source: Bureau of the Census report, IM 145, *U.S. Imports for Consumption*.³Data for product codes 38220 25, 78, "Pressure responsive automatic controls (pressurstats and manostats)," and 38220 30, 77, "Hydraulic and pneumatic automatic controls," are combined with product codes 38220 35, 40, 45, 50, 55, 60, 65, 66-69, 71, 74, 81, "Automatic controls, n.e.c.," to avoid disclosing figures for individual companies.⁴Data for product code 38243 82, "Parking meters, including parts and components," are combined with product codes 38243 19, 21, 23, 25, 27, 29, 76, 85, 38244 00, 38253 00, 38291 00, "Counting devices, n.e.c., including taxi meters and parts, and motor vehicle instruments," to avoid disclosing figures for individual companies.⁵Data for product code 38295 34, "Liquid-in-glass thermometers, clinical," are combined with product codes 38295 22-24, "Liquid-in-glass thermometers, n.e.c.," to avoid disclosing figures for individual companies.

HISTORICAL NOTE

Data on selected instruments and related products have been collected by the Bureau of the Census since 1961. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Indrek Grabbi, 301-763-5434.

7.10 ELECTROMEDICAL EQUIPMENT AND IRRADIATION EQUIPMENT (INCLUDING X-RAY)

INTRODUCTION

These data cover manufacturers of electromedical and irradiation equipment (including X-ray), except very small firms (generally less than 20 employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies.

The statistics were collected by mail on Bureau of the Census annual Form MA38R, Electromedical Equipment and Irradiation Equipment (Including X-ray). The survey panel includes all known producers of these products, except the very small firms excluded from the scope of the survey. Approximately 220 companies are included. No estimate is derived for the small firms excluded from the survey.

SUMMARY OF FINDINGS

During 1992, the total value of shipments of electromedical and irradiation equipment increased by 5 percent to \$8,272.0 million, from the 1991 level of \$7,879.0 million.

X-ray and other irradiation equipment increased by 7 percent to \$2,349.5 million, compared with the 1991 figure of \$2,205.2 million. Electromedical equipment increased by 4 percent to \$5,922.5 million, from the 1991 level of \$5,673.8 million.

EXPLANATION OF TERMS

Research and Development. Dollar shipments reflect income from development, design, and engineering services performed by the reporting plant in connection with the manufacture of the products shipped, whether included in a single production contract, or contracted for separately, but intended as preparation for the manufacture of the specific products.

Table 29. **VALUE OF SHIPMENTS OF ELECTROMEDICAL AND IRRADIATION EQUIPMENT, BY CLASS OF PRODUCT: 1987 TO 1992**

[Value in millions of dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987
38440	X-ray and other irradiation equipment.	2,349.5	2,205.2	1,870.4	1,745.2	1,585.9	1,571.0
38450	Electromedical equipment.	5,922.5	5,673.8	4,849.6	4,594.2	4,017.2	3,387.3

¹Starting in 1992, product code 38450, "Electromedical equipment," includes "Medical laser equipment," which was formerly shown in product code 36992, "Laser systems and equipment (except communication)."

Table 30. QUANTITY AND VALUE OF SHIPMENTS OF ELECTROMEDICAL AND IRRADIATION EQUIPMENT: 1992 AND 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
	Medical diagnostic equipment	105	(X)	4,388,731	(X)	4,185,736
	X-ray equipment:					
38440 02	Digital radiography equipment	4	487	83,431	508	83,714
38440 03	Computerized axial tomography (CT or CAT scan)	8	3,884	475,962	3,741	452,521
38440 09	Dental AND	3				
38440 05	Conventional	4	14,376	622,089	12,487	605,087
38440 11	All other medical diagnostic X-ray equipment	13	(X)	136,129	(X)	122,285
38440 06	Nuclear medicine equipment (all equipment used for nuclear in vivo studies)	5	757	138,096	699	101,772
38450 18	Magnetic Resonance Imaging (MRI) equipment	7	709	636,271	810	716,760
38450 17	Ultrasound scanning devices	13	^b 10,661	754,494	10,116	678,680
38450 11	Electrocardiograph (ECG)	12	31,214	184,102	34,527	184,744
38450 13	Electroencephalograph (EEG) AND	3				
38450 15	Electromyograph (EMG)	5	1,364	34,710	1,321	33,386
38450 21	Audiological equipment	9	(X)	25,345	(X)	24,395
38450 23	Endoscopic equipment (bronchoscope, cystoscope, proctosigmoidoscope, colonoscope, etc.)	6	3,489	18,291	3,375	^c 19,410
38450 25	Respiratory analysis equipment	5	4,130	33,403	3,791	34,302
38450 29	All other medical diagnostic equipment	28	(X)	^a 250,426	(X)	^c 208,061
	Patient monitoring equipment:					
38450 51	Intensive care/coronary care units, including component modules such as temperature, blood pressure, and pulse	20	(X)	537,523	(X)	^c 499,657
38450 53	Prenatal monitoring AND	5				
38450 55	Respiratory monitoring	4	(X)	89,900	(X)	^c 95,577
38450 57	All other patient monitoring	26	(X)	368,559	(X)	325,385
	Medical therapy equipment	56	(X)	2,008,940	(X)	2,019,444
38440 32	Radiation therapy (linear accelerators, X-ray, cobalt 60, brachetherapy)	7	(X)	276,784	(X)	277,152
38450 43	Ultrasound therapy	7	(X)	33,690	(X)	^c 29,308
38450 31	Pacemakers	8	152,803	546,980	148,684	522,386
38450 33	Defibrillators	11	25,848	227,395	38,910	302,530
38450 37	Diathermy apparatus (short wave and microwave) AND	2				
38450 39	Dialyzers, including machines and equipment	5	(X)	192,072	(X)	187,957
38450 41	Medical laser equipment	14	(X)	^c 398,730	(X)	^c 388,532
38450 34	Extracorporeal lithotripters AND	2				
38450 49	All other medical therapy equipment	30	(X)	333,289	(X)	311,579
	All other irradiation and electromedical equipment	42	(X)	1,874,255	(X)	1,673,817
38440 13	Industrial and scientific X-ray equipment	15	1,445	96,490	1,493	96,432
38440 21	X-ray tubes (sold separately)	10	46,086	320,002	44,017	254,947
38440 23	Other non-medical irradiation equipment, including gamma- and beta-ray equipment, n.e.c. AND	2				
38440 27	Parts and accessories for X-ray equipment and other non-medical irradiation equipment, n.e.c.	20	(X)	^a 200,480	(X)	211,268
	Surgical systems:					
38450 35	Electrosurgical equipment	11	(X)	214,085	(X)	178,911
38450 71	Heart-lung machines, excluding iron lungs AND	3				
38450 73	Blood flow systems	6	(X)	300,187	(X)	^c 269,906
38450 75	All other surgical support systems	10	(X)	292,607	(X)	^c 239,359
38450 83	Other electromedical equipment (except diagnostic and therapeutic), n.e.c. AND	3				
38450 89	Electromedical parts and accessories, including diagnostic and therapeutic, n.e.c.	37	(X)	450,404	(X)	422,994
50650 00	Selected nonmanufacturing revenues: Supplies and accessories for use with irradiation and electromedical equipment (resales)	26	(X)	² 219,375	(X)	(²)

See footnotes at end of table.

Table 30. **QUANTITY AND VALUE OF SHIPMENTS OF ELECTROMEDICAL AND IRRADIATION EQUIPMENT: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
73720 00	Selected nonmanufacturing revenues—Cont.					
	Software services, including receipts from all nonhardware related activities AND	4				
73731 00	Medical picture archiving and communications equipment (MED-PACS) AND	2				
73732 00	Systems integration revenues, including configuration, installation and site preparation, and custom programming	6	(X)	² 43,580	(X)	(^c)
99980 00	Other nonmanufacturing revenues.	22	(X)	² 90,978	(X)	(^c)

Note: The percent of estimation of each item is indicated as follows: ^a15 to 25 percent of this item is estimated; ^b26 to 50 percent of this item is estimated; ^c Over 50 percent of this item is estimated.

¹Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹Product code 38450 41, "Medical laser equipment," was formerly shown in product code 36992 87, "Medical laser equipment."

²Data for "Selected nonmanufacturing revenues" are shown for the first time in 1992.

Table 31. **SHIPMENTS, EXPORTS, AND IMPORTS OF ELECTROMEDICAL AND IRRADIATION EQUIPMENT: 1992**

[Value in thousands of dollars]

Product code	Product description	Manufacturers' shipments (value f.o.b. plant)	Exports of domestic merchandise (value at port) ¹	Imports for consumption (value) ²
38440 02, 03, 09, 05, 11, 06, 32	Medical X-ray, nuclear medicine equipment, and radiation therapy equipment.....	1,732,491	438,575	771,185
38440 13	Industrial and scientific X-ray equipment	96,490	41,182	32,020
38440 21	X-ray tubes sold separately.....	320,002	103,678	36,828
38440 27	Parts and accessories for X-ray equipment and other non-medical irradiation equipment, n.e.c.....	(NA)	154,590	207,974
38440 23	Non-medical irradiation equipment, including gamma- and beta-ray equipment, n.e.c.....	(NA)	15,040	6,146
38450 11	Electrocardiograph (ECG), diagnostic	184,102	64,373	6,972
38450 13, 15	Electroencephalographs (EEG) and electromyographs (EMG), diagnostic	34,710	10,322	12,275
38450 17	Ultrasound scanning devices, diagnostic	754,494	248,867	41,635
38450 31	Pacemakers, therapeutic	546,980	125,525	4,281
38450 18, 21, 23, 25, 29	Diagnostic electromedical equipment, n.e.c.	963,736	677,757	554,140
38450 33, 34, 37, 41, 49	Therapeutic electromedical equipment, n.e.c.	(NA)	135,005	25,174
38450 71, 73, 75, 83	Electromedical equipment and irradiation equipment, including X-ray, n.e.c.....	(NA)	155,859	220,738
38450 39	Dialyzers, machines and equipment	(NA)	77,226	49,602
38450 51, 53, 55, 57	Patient monitoring equipment	995,982	232,943	29,895
38450 43	Therapeutic ultrasound equipment.....	33,690	20,083	4,169
38450 35	Electrosurgical equipment	210,335	182,368	54,943
38450 89	Electromedical parts and accessories, including diagnostic and therapeutic, n.e.c.	(NA)	325,157	316,403

(NA) Not available.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.**HISTORICAL NOTE**

Data on selected electronic and associated products have been collected by the Bureau of the Census since 1961 on survey MA36N, Selected Electronics and Associated Products. In 1985, survey MA36N was divided into three annual surveys: MA36P, Communication Equipment, Including Telephone, Telegraph, and Other Electronic Systems and Equipment; MA36Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components; and

MA38R (formerly MA36R), Electromedical Equipment and Irradiation Equipment (Including X-ray). Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Indrek Grabbi, 301-763-5434.

Chapter 8. CONSUMER DURABLES

8.1 ELECTRIC HOUSEWARES AND FANS

INTRODUCTION

These data cover manufacturers of electric housewares and fans in the United States. These statistics were collected by mail on Bureau of the Census annual Form MA36E, Electric Housewares and Fans. The survey panel includes all known manufacturers of electric housewares and fans, approximately 105 companies.

1991 total of \$409.6 million. The 1992 value of small household electric appliances totaled \$1,558.3 million, an increase of 18 percent from the 1991 figure of \$1,317.4 million.

EXPLANATION OF TERMS

See the Introduction for an explanation of terms.

SUMMARY OF FINDINGS

In 1992, manufacturer's shipments of electric fans totaled \$473.1 million, an increase of 16 percent from the

Table 1. **VALUE OF SHIPMENTS OF ELECTRIC HOUSEWARES AND FANS, BY CLASS OF PRODUCT: 1983 TO 1992**

[Millions of dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
36341	Electric fans (except industrial type) . . .	473.1	409.6	482.0	531.5	526.1	492.5	473.1	500.7	589.4	561.9
36345	Small household electric appliances . . .	1,558.3	1,317.4	1,778.7	1,914.9	2,004.5	1,810.3	1,945.3	1,940.4	2,068.0	1,966.5
36349	Parts and attachments for small household and household appliances	115.1	98.7	104.3	104.3	128.1	106.4	172.4	196.4	152.7	(NA)

(NA) Not available.

Table 2. QUANTITY AND VALUE OF SHIPMENTS OF ELECTRIC HOUSEWARES AND FANS, BY PRODUCT: 1992 and 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36341	Electric fans (except industrial)	(X)	21,269,235	473,133	18,549,186	409,604
36341 31	Desk and wall bracket ¹	2	2,902,856	50,485	'2,886,381	'48,523
36341 71	Window (household) permanent, portable and roll-abouts	6	6,288,360	91,345	'5,936,915	'84,198
36341 91	Ceiling (paddle) fans	8	4,464,341	112,498	3,560,953	95,260
36341 97	All other electric fans (except industrial), including electric range hoods, oven hoods, ventilating, and exhaust fans	15	7,613,678	218,805	'6,164,937	'181,623
36345 —	Small electric household appliances (except fans)	(X)	(X)	1,558,282	(X)	1,317,402
	Electrothermal type	(X)	(X)	1,172,169	(X)	1,239,366
36345 11	Broilers	7	410,193	13,306	449,756	14,064
	Coffee makers:					
36345 18	Drip type	7	8,535,870	167,653	10,775,496	197,270
36345 19	Percolator or vacuum type	5	1,399,849	21,358	1,544,627	22,123
36345 21	Urn type	4	852,696	26,269	842,880	25,411
36345 23	Deep fat fryers, excluding covers and controls shipped separately	7	2,986,007	42,518	2,672,956	35,673
36345 24	Ovens, including toaster ovens and roasters (with or without broiler attachments)	9	3,913,819	137,607	3,431,016	'119,994
36345 29	Hot plates and disc stoves, 1650 watts and less (except built-in units)	8	1,392,579	17,164	1,405,695	19,124
36345 39	Waffle irons, sandwich grills, griddles, and combinations	11	2,297,945	60,104	4,133,663	94,198
36345 42	Frying pans, skillets, excluding covers and controls shipped separately	7	3,427,780	69,425	3,436,322	70,781
	Air space heaters					
	Portable room heaters:					
36345 43	Fan forced type	13	2,099,816	52,109	3,181,257	76,700
36345 44	Other than fan forced type type (convector, radiant, etc.)	10	485,997	8,789	593,685	11,149
	For fixed installation, all types:					
36345 45	Baseboard, excluding glass panel type ..	7	1,042,121	23,680	1,034,729	22,934
36345 47	Other than baseboard, excluding warm air furnaces	7	1,208,313	59,005	1,116,067	'51,695
36345 51	Corn poppers ²	2	1,524,781	17,283	2,014,750	22,632
	Electric irons:					
36345 50	Steam and spray (standard household) ...	4	3,276,442	48,398	(³)	(³)
36345 63	Other than steam auto type (standard household and travel irons) ³	-	-	-	'3,597,846	'49,628
36345 86	Electric bed coverings, including sheets, mattress covers, comforters, and blankets ..	3	3,198,000	96,187	2,966,166	85,759
36345 87	Electric heating pads, including foot warmers	6	4,205,908	38,805	3,739,693	32,697
36345 96	Portable humidifiers, including vaporizers.	8	2,237,787	39,367	'2,048,964	'41,525
36345 97	Other small electrothermal food processing appliances, including such items as pressure cookers, automatic saucepans, toasters, casseroles, chafing dishes, and crockpots; excluding covers and controls shipped separately	9	16,862,264	211,486	13,654,503	155,498
36345 98	Other small electrothermal household appliances, including such items as immersion heaters, faucet attachment, water heaters, steam radiators, warming trays, food warmers, bottle warmers, hair curlers, curling irons, hair dryers, etc; excluding covers and controls shipped separately	16	5,076,786	94,305	4,559,350	78,036
	Electromechanical type, including cordless	(X)	(X)	386,113	(X)	299,263
	Household food mixers, including value of standard attachments sold with mixers					
36345 71	Hand (portable) AND	5				
36345 75	Stand type	4	3,246,366	134,397	2,923,380	115,923
36345 76	Blenders (liquefiers)	5	6,224,120	142,457	5,173,726	101,272
36345 83	Household food processors, including food choppers, slicers and shredders	7	1,053,474	30,122	'1,167,765	'29,557

See footnotes at end of table.

Table 2. QUANTITY AND VALUE OF SHIPMENTS OF ELECTRIC HOUSEWARES AND FANS, BY PRODUCT: 1992 and 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36345 —	Small electric household appliances (except fans)—Cont.					
	Electromechanical type, including cordless—Cont.					
36345 84	Household food preparation appliances, (except food mixers and food processors), including drink mixers, whippers, juicers, grinders, ice crushers, and coffee grinders	9	2,848,067	71,420	2,571,558	45,944
36345 90	Portable air purifiers and portable dehumidifiers	7	695,091	7,717	'510,466	'6,567
36345 95	Other small electromechanical appliances, including knife sharpeners, scissors, tooth brushes, vibrators, electric razors, and dry shaves, can openers, etc.	18	11,123,876	195,087	'9,698,547	'194,678
36399 —	Parts and attachments for small household electric appliances	(X)	(X)	115,110	(X)	98,723
36349 13	Electrothermal in operation (value only)	10	(X)	81,608	(X)	'67,898
36349 18	Electromechanical in operation (value only)	6	(X)	9,542	(X)	'4,499
36349 89	Other (value only)	9	(X)	23,960	(X)	'26,326

- Represent zero. 'Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹Data for product code 36341 31 are combined with product code 36341 97 to avoid disclosing figures for individual companies.

²Data for product code 36345 51 are combined with product code 36345 97 to avoid disclosing figures for individual companies.

³For 1991, data for product code 36345 50 are combined with product code 36345 63 to avoid disclosing figures for individual companies.

Table 3. SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF ELECTRIC HOUSEWARES AND FANS: 1992

[Quantity in number of units; value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Imports for consumption ²	
	Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	Value
Electric fans (except industrial)	21,269,235	473,133	897,376	24,497	30,350,001	597,730
Coffee makers	10,788,415	215,280	677,474	17,606	12,133,975	175,354
Air space heaters	4,836,247	143,583	1,094,673	17,675	3,326,813	60,939
Electric irons	3,276,442	48,398	1,142,580	11,966	18,127,878	175,140
Electric bed coverings	3,198,000	96,187	113,485	3,492	6,641	238
Other small electrothermal food processing appliances	(X)	693,052	(NA)	(NA)	24,002,349	75,652
Other electrothermal small house appliances	(X)	189,641	1,953,730	61,098	36,817,126	293,958
Household food mixers	3,246,366	134,397	1,389,665	36,036	12,537,729	123,202
Household food preparation appliances	2,848,067	71,420	403,460	11,232	14,975,763	252,520
Portable air purifiers and humidifiers	122,582	7,717	517,816	24,025	1,238,146	26,276
Other small electromechanical appliances	18,404,087	367,715	(NA)	(NA)	24,862,182	293,678
Parts and attachments	(X)	115,110	(X)	(X)	(X)	34,676

(NA) Not available. (X) Not applicable.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.

²Source: Bureau of the Census report IM 145, *U.S. General Imports for Consumption*.

HISTORICAL NOTE

Data on electric housewares and fans have been collected by the Bureau of the Census since 1962. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Lynn Sizemore, 301-763-5547 or Cynthia Ramsey, 301-763-5440.

8.2 MAJOR HOUSEHOLD APPLIANCES

INTRODUCTION

These data cover manufacturers of major household appliances and parts in the United States. These statistics were collected by mail on Bureau of the Census annual Form MA36F, Major Household Appliances. The survey panel includes all known manufacturers of major household appliances, approximately 105 companies.

SUMMARY OF FINDINGS

During 1992, the total value of shipments of major household appliances was \$12.5 billion, an increase of 6 percent from \$11.8 billion in 1991. Electric ranges and parts

accounted for \$1.7 billion; gas ranges and parts, \$616.2 million; refrigerators and freezers, \$3.9 billion; laundry machines and parts, \$3.1 billion; and dishwashing machines, food waste disposers, floor waxing machines, trash compactors and parts, \$1.3 billion. The corresponding figures for 1991 were electric ranges and parts, \$1.6 billion; gas ranges and parts, \$609.5 million; refrigerators and freezers, \$3.6 billion; laundry machines and parts, \$2.9 billion, and dishwashing machines, food waste disposers, floor waxing machines, and trash compactors and parts, \$1.2 billion.

EXPLANATION OF TERMS

See the Introduction for an explanation of terms.

Table 4. **VALUE OF SHIPMENTS OF MAJOR HOUSEHOLD APPLIANCES BY CLASS OF PRODUCTS: 1982 To 1992**

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982
36311	Electric household ranges, ovens, and surface cooking units, equipment and parts	1,730.0	1,614.9	1,659.8	1,767.6	1,809.2	1,963.9	1,928.0	2,033.6	2,263.4	2,016.5	1,489.5
36313	Gas household ranges, ovens, and surface cooking units, equipment and parts	616.2	609.5	739.4	710.0	648.5	666.5	667.8	585.6	542.1	491.6	394.8
36314	Other household ranges and cooking equipment and outdoor cooking equipment, including parts and accessories	707.8	657.4	581.1	560.3	577.0	533.5	465.6	484.0	465.8	401.9	372.9
36321	Household refrigerators, including combination refrigerators, freezers	13,941.0	13,362.7	3,208.1	3,522.5	3,329.7	3,017.3	2,854.2	2,613.7	2,573.4	2,249.3	1,762.3
36322	Home and farm freezers	(¹)	277.4	226.6	226.1	252.7	228.0	230.7	251.4	279.1	305.5	309.2
36323	Parts and attachments for household refrigerators and freezers	98.0	127.9	134.0	131.0	136.4	75.5	105.4	88.1	(²)	(²)	(²)
36330	Household laundry machines and parts ³	3,070.6	2,919.0	2,924.5	2,980.5	2,887.8	2,790.4	2,817.7	2,522.9	2,078.9	1,876.2	1,530.4
36391	Water heaters, electric	471.8	446.7	433.8	417.3	398.0	382.7	383.2	383.8	397.9	331.0	282.3
36392	Water heaters (except electric)	593.8	616.1	577.2	569.9	543.6	523.6	518.3	474.2	514.7	419.7	380.0
36395	Household appliances, n.e.c. and parts ³	1,254.6	1,170.8	1,185.5	1,238.6	1,274.9	1,286.0	1,110.2	1,127.7	1,023.7	885.3	668.2

n.e.c. Not elsewhere classified. ¹Revised by 5 percent or more.

¹For 1992 product code 36322 is included with 36321 to avoid disclosure of individual companies.

²Before 1985 data were not collected for product class 36323.

³For 1984 and earlier years product classes 36330 and 36395 do not include parts.

Table 5. QUANTITY AND VALUE OF SHIPMENTS OF MAJOR HOUSEHOLD APPLIANCES: 1992 AND 1991

[Quantity in thousands of units; value in millions of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
	Major household appliances	(X)	(X)	12,483.8	(X)	11,802.4
36311 —	Electric ranges, ovens, and surface cooking units, equipment, and parts	25	8,267.6	1,730.0	7,400.1	1,614.9
	Free-standing ranges (widths are based on outside dimensions):					
36311 11	Under 23 (58.4 cm) inches in width, all types, including apartment house type ..	6	94.9	16.8	94.5	17.0
	23 (58.4 cm) inches up to and including 32 (81.3 cm) inches in width:					
36311 21	Low oven, including slide-ins	7	2,106.9	647.2	2,034.6	611.1
36311 24	High oven	-	-	-	(D)	(D)
36311 26	High-low oven	3	(D)	(D)	(D)	(D)
36311 35	33 (83.8 cm) inches and over in width, all types	4	(D)	(D)	(D)	(D)
	Other than free-standing:					
	Built-in ranges:					
	Built-in ovens:					
36311 53	Single oven	7	332.9	128.8	'256.0	'105.8
36311 55	Two ovens	5	80.6	51.8	'79.1	'47.3
36311 61	Surface cooking tops	8	411.9	87.2	366.4	77.2
36311 65	Drop-in ranges	6	129.7	57.3	132.4	51.4
36311 73	Microwave ranges and ovens, including combination microwave/ electric ranges and built-in ovens which utilize microwave and electric thermo energy in one or more of the oven cavities	6	77.6	55.0	'67.0	'47.6
36311 74	Microwave ovens, including counter top, built-in and wall or cabinet hung ovens	8	3,544.9	455.6	3,391.5	438.5
36311 79	Other electric and electronic ranges and ovens not listed above	2	(D)	(D)	(D)	(D)
36311 85	Parts and accessories for household electric ranges and ovens, such as burners, rotisseries, oven racks, broiler pans, etc., (sold separately)	19	(X)	*183.8	(X)	'172.8
36313 —	Gas household ranges, ovens, and surface cooking units, equipment, and parts	16	1,990.6	616.2	1,954.3	609.5
	Standard type, free-standing:					
36313 11	Over 32 (81.3 cm) inches cooking top and oven	6	57.1	24.9	'71.3	'29.1
36313 13	Over 24 (61 cm) inches to 32 (81.3 cm) inches cooking top and oven	7	1,148.1	344.6	1,163.2	350.8
36313 15	Apartment ranges, 24 (61 cm) inches cooking top and under	5	216.1	40.9	179.6	35.2
36313 17	Standard type, for built-in installation (built-in or stack-on oven broiler unit)	3	(D)	(D)	(D)	(D)
36313 19	Surface cooking tops (one or more burners)	7	225.3	49.0	181.0	38.3
	Nonstandard types:					
36313 21	Wall hung	1	(D)	(D)	(D)	(D)
36313 23	Slide-in or drop-in, including as one unit drop-in cooking surface with a slide-in oven	5	253.1	58.7	238.8	59.6
36313 39	Other gas household ranges, ovens, hot plates, and surface cooking units, not listed above	4	(D)	(D)	(D)	(D)
36313 85	Parts and accessories for gas household ranges and ovens, such as burners, rotisseries, oven racks, and broiler pans (sold separately)	14	(X)	51.0	(X)	41.4

See footnotes at end of table.

Table 5. QUANTITY AND VALUE OF SHIPMENTS OF MAJOR HOUSEHOLD APPLIANCES: 1992 AND 1991—Continued

[Quantity in thousands of units; value in millions of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36314 —	Major household appliances—Cont. Other household ranges and cooking equipment (except gas and electric) and outdoor cooking equipment, including parts and accessories	20	10,611.9	707.8	10,404.8	657.4
	Barbecuers, grills, stoves, braziers, etc., for outdoor cooking and other cooking:					
	Permanently installed units:					
36314 11	Gas fuel or both gas and other fuel....	2	(D)	(D)	(D)	(D)
36314 12	Solid fuel (charcoal, wood, coal, etc.) ..	1	(D)	(D)	(D)	(D)
36314 13	Liquid fuel (oil, kerosene, etc.)	-	-	-	-	-
36314 14	Electric	-	-	-	-	-
	Portable units:					
36314 22	Gas fuel or both gas and other fuel....	8	^a 2,837.2	293.9	^r 2,649.8	^r 267.1
36314 24	Solid fuel (charcoal, wood, coal, etc.) ..	9	5,143.9	98.0	5,111.6	^r 93.9
36314 26	Liquid fuel (oil, kerosene, etc.)	7	2,489.2	241.4	2,494.7	233.6
36314 27	Electric	4	(D)	(D)	(D)	(D)
36314 29	Parts and accessories for outdoor cooking equipment (sold separately)	13	(X)	63.0	(X)	^r 50.8
36321 —	Household refrigerators, including combination refrigerator-freezers	14	¹ 9,396.1	¹ 3,941.0	7,598.9	3,362.7
	Compression type, fitted with separate external doors, including all combinations with two or more external doors:					
36321 01	6.4 cu. ft. and under (under 184 liters) AND	3				
36321 03	6.5 to 9.4 cu. ft. (184 liters but under 269 liters)	1	30.2	6.6	20.7	4.9
36321 09	9.5 to 13.4 cu. ft. (269 liters but under 382 liters)	4	158.1	45.1	88.6	22.1
36321 12	13.5 to 15.4 cu. ft. (382 liters but under 438 liters)	5	1,160.7	380.8	^r 1,428.9	^r 466.2
36321 14	15.5 to 17.4 cu. ft. (438 liters but under 495 liters)	5	671.2	234.1	570.2	188.7
36321 19	17.5 to 19.4 cu. ft. (495 liters but under 552 liters)	6	1,830.1	766.0	1,579.4	652.0
36321 24	19.5 to 21.4 cu. ft. (552 liters but under 608 liter)	6	1,276.1	603.1	1,289.5	604.0
36321 26	21.5 cu. ft. and over (608 liters and over)	7	1,809.8	1,375.2	1,688.3	1,245.7
36321 62	Non-compression household refrigerator-freezers, fitted with separate external doors, all sizes	2	(D)	(D)	(D)	(D)
	Compression types, fitted with only one external door:					
36321 63	6.4 cu. ft. and under (184 liters)	8	856.5	^a /110.7	738.4	98.8
36321 65	6.5 to 9.4 cu. ft. (184 liters but under 269 liters) AND	3				
36321 69	9.5 to 13.4 cu. ft. (269 liters but under 382 liters) AND	2				
36321 73	13.5 cu. ft. and over (382 liters and over)	3	90.9	29.4	92.3	33.4
36321 74	Absorption type, electrical, fitted with only one external door	-	-	-	(D)	(D)
36321 79	Other household refrigerators, (non-compression type, fitted with one external door)	2	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 5. QUANTITY AND VALUE OF SHIPMENTS OF MAJOR HOUSEHOLD APPLIANCES: 1992 AND 1991—Continued

[Quantity in thousands of units; value in millions of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36322 —	Major household appliances—Cont.					
	Food freezers, complete units, for freezing and/or storing frozen food (household type) .	8	¹ (D)	¹ (D)	1,252.1	277.4
	Upright type freezers.....	(X)	(D)	(D)	(D)	(D)
36322 01	6.4 cu. ft. and under (under 184 liters) ...	2	(D)	(D)	(D)	(D)
36322 03	6.5 to 9.4 cu. ft. (184 liters but under 269 liters).....	-	-	-	-	-
36322 04	9.5 to 13.4 cu. ft. (269 liters but under 382 liters).....	3	(D)	(D)	(D)	(D)
36322 07	13.5 to 15.4 cu. ft. (382 liters but under 438 liters).....	3	(D)	(D)	82.6	23.8
36322 08	15.5 to 17.4 cu. ft. (438 liters but under 495 liters).....	3	(D)	(D)	151.9	37.4
36322 09	17.5 to 19.4 cu. ft. (495 liters but under 552 liters).....	1	(D)	(D)	(D)	(D)
36322 10	19.5 to 21.4 cu. ft. (552 liters but under 608 liters).....	4	(D)	(D)	79.5	28.4
36322 12	21.5 cu. ft. and over (608 liters and over).....	2	(D)	(D)	(D)	(D)
	Chest type freezers.....	(X)	(D)	(D)	(D)	(D)
36322 51	6.4 cu. ft. and under (under 184 liters) ...	3	(D)	(D)	163.4	24.9
36322 57	6.5 to 9.4 cu. ft. (184 liters but under 269 liters).....	3	(D)	(D)	(D)	(D)
36322 61	9.5 to 13.4 cu. ft. (269 liters but under 382 liters).....	3	(D)	(D)	(D)	(D)
36322 67	13.5 cu. ft. and over (382 liters and over).....	2	(D)	(D)	(D)	(D)
36323 00	Parts and attachments for household refrigerators and freezers, excluding compressors and condensing units and ice making machines.....	14	(X)	98.0	(X)	127.9
36330 —	Household laundry machines (household type defined as having a dry linen capacity not exceeding 10 kg (22 lbs.)) and parts.....	6	(X)	3,070.6	(X)	2,919.0
	Washing machines, mechanical, including those with dishwasher attachments:					
	Fully automatic washing machines (electric).....					
36330 11	Coin-operated.....	5	² 462.7	² 236.8	² 294.8	² 154.3
36330 31	Non-coin-operated.....	6	6,102.7	1,694.3	6,108.9	1,685.2
36330 37	Other washing machines, including machines with a built-in centrifugal drier and gasoline driven.....	3	(²)	(²)	(²)	(²)
	Dryers, mechanical (incorporating heat):					
36330 51	Gas (non-coin-operated).....	6	1,105.8	270.1	988.3	236.4
36330 55	Electric (non-coin-operated).....	5	3,258.2	672.8	3,067.0	630.6
36330 15	Coin-operated.....	6	132.4	44.0	109.6	44.3
36330 59	Other drying equipment (not incorporating heat) centrifugal wringers, spinners, etc....	-	-	-	-	-
	Parts, accessories, and attachments for household laundry equipment (sold separately):					
36330 96	For household washing machines.....	8	(X)	136.1	(X)	143.1
36330 97	For household drying machines.....	6	(X)	^a 16.5	(X)	^a 25.1
36391 —	Water heaters, electric (for permanent installation).....	11	3,211.6	471.8	3,689.2	446.7
	Storage type (gallons) (liters):					
36391 11	34 and under (128.7 liters and under)	8	721.6	89.4	1,002.7	98.3
36391 12	35 to 44 (132.5 liters to 166.5 liters).....	8	882.8	121.7	1,024.4	122.0
36391 14	45 to 54 (170.3 liters to 204.4 liters).....	8	1,026.9	161.9	1,108.3	142.4
36391 15	55 and over (208.2 liters and over).....	8	258.0	58.3	(²)	(²)
36391 98	Other types, including circulating and portable storage.....	5	322.3	40.5	^c 553.8	^c 84.0

See footnotes at end of table.

Table 5. QUANTITY AND VALUE OF SHIPMENTS OF MAJOR HOUSEHOLD APPLIANCES: 1992 AND 1991—Continued

[Quantity in thousands of units; value in millions of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36392 —	Major household appliances—Cont.					
	Water heaters (except electric).....	13	3,716.5	593.8	4,077.7	616.1
	Direct fired water heaters:					
36392 12	Gas.....	8	3,562.2	566.4	3,941.6	587.3
36392 24	Oil.....	3	(4)	(4)	(4)	(4)
36392 32	Coal or wood tank heaters.....	-	-	-	-	-
36392 52	Indirect water heaters, including storage, cast or coil type (less tank); tanks (with or without generator coils); generator coils with tank collar (sold without tank); and instantaneous.....	7	⁴ 154.3	⁴ 27.4	⁴ 136.1	⁴ 28.8
36395 —	Household dishwashing machines, food waste, disposers, floor-waxing machines, trash compactors, and parts.....	19	(X)	1,254.6	(X)	1,170.8
	Dishwashing machines:					
36395 12	Portable type, including convertible type..	5	186.0	51.8	224.6	61.0
36395 14	Built-in type.....	5	3,617.7	810.6	3,399.7	764.0
36395 63	Floor-waxing, polishing, scrubbing, and shampooing machines (for household use only).....	3	609.3	72.4	457.4	⁵ 50.7
36395 71	Food waste disposers (all sizes, of the electromechanical, comminutor type, operating in conjunction with household plumbing systems of the type generally used in residences).....	4	(D)	(D)	(D)	(D)
36395 72	Household trash compactors.....	6	117.8	31.3	113.3	27.1
36395 75	Household sewing machines, including heads for sale with cabinets or cases, and heads for sale separately.....	-	-	-	-	-
36395 60	Other major household appliances, n.e.c....	-	-	-	-	-
	Parts for other household appliances, n.e.c.: ..					
36395 91	For electric water heaters.....	7	(X)	^a 14.8	(X)	¹ 12.4
36395 92	For non-electric water heaters.....	5	(X)	^a 13.8	(X)	12.9
36395 93	For dishwashing machines.....	7	(X)	38.1	(X)	40.8
36395 94	For floor waxing, polishing, scrubbing and shampooing machines.....	2	(X)	(D)	(X)	(D)
36395 95	For food waste disposers.....	3	(X)	(D)	(X)	(D)
36395 96	For household trash compactors.....	2	(X)	(D)	(X)	(D)
36395 98	For household sewing machines, excluding cabinets and cases (value only).....	-	(X)	-	(X)	-
36395 97	For other major household appliances, n.e.c.....	1	(X)	(D)	(X)	(D)

Note: The percent of estimation of each item is indicated as follows: ^a10 to 25 percent of this item is estimated. ^b26 to 50 percent of this item is estimated. ^cOver 50 percent of this item is estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. n.e.c. Not elsewhere classified.
¹Revised by 5 percent or more. (X) Not applicable.

¹Product code 36322 is included with product code 36321 to avoid disclosure of individual companies.

²Data for product code 36330 37, "Other washing machines, including machines with a built-in centrifugal drier and gasoline driven," are included in product code 36330 11, "Fully automatic washing machines (electric) coin-operated," to avoid disclosures of individual companies.

³For 1991, product code 36391 15 is included with product code 36391 98 to avoid disclosure of individual companies.

⁴Data for product code 36392 24, "Oil direct fired water heaters," are included in product code 36392 52, "Indirect water heaters," to avoid disclosures of individual companies.

Table 6. SHIPMENTS, EXPORT, AND IMPORT, OF MAJOR HOUSEHOLD APPLIANCES: 1992 AND 1991

[Quantity in thousands of units; value in millions of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ^{1 2}		Imports for consumption ^{1 3}	
	Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	Value in foreign country
1992						
Electric ranges and ovens.....	4,645	1,036	166	52	981	80
Microwave ovens.....	3,623	511	469	77	4,691	490
Parts and accessories for electric ranges.....	(X)	184	(X)	20	(X)	83
Gas ranges and ovens.....	1,991	565	212	41	902	186
Parts for gas cooking stoves.....	(X)	51	(X)	15	(X)	33
Other cooking appliances (solid fuel).....	(NA)	(NA)	58	4	259	6
Other cooking appliances (liquid fuel).....	(NA)	(NA)	362	17	27	1
Other cooking appliances (gas fuel) (portable)...	2,837	294	377	38	627	11
Other cooking appliances (solid fuel) (portable)...	5,144	98	88	7	1,827	12
Parts and accessories for other cooking equipment.....	(X)	63	(NA)	(NA)	(NA)	(NA)
Compressor type refrigerator, fitted with separate doors:						
6.4 cu. ft. and under (under 184 liters).....	(⁴)	(⁴)	30	12	61	6
6.5 to 9.4 cu. ft. (184 liters but under 269 liters).....	⁴ 30	⁴ 7	8	5	21	5
9.5 to 13.4 cu. ft. (269 liters but under 382 liters).....	158	45	15	7	16	5
13.5 cu. ft. and over (382 liters and over)...	6,748	3,359	398	234	525	21
Non-compressor household refrigerator-freezers with separate external doors, all sizes.	(D)	(D)	21	9	4	1
Compressor type, fitted with one external door:						
6.4 cu. ft. and under (under 184 liters).....	857	111	123	57	1,071	88
6.5 to 9.4 cu. ft. (184 liters but under 269 liters).....	(⁵)	(⁵)	12	7	40	8
9.5 to 13.4 cu. ft. (269 liters but under 382 liters) AND	(⁵)	(⁵)	63	32	171	35
13.5 cu. ft. and over (382 liters and over).....	⁵ 91	⁵ 29	324	160	380	3
Absorption, electrical fitted with one external door.....	-	-	12	4	96	43
Other household refrigerators.....	(D)	(D)	106	22	61	20
Freezers, upright type.....	(D)	(D)	63	24	59	13
Freezers, chest type.....	(D)	(D)	142	41	239	43
Fully automatic electric washing machines (coin-operated) ⁴	463	737	17	7	(Z)	(Z)
Fully automatic electric washing machines (non-coin-operated).....	6,103	1,694	756	222	(NA)	(NA)
Other washing machines.....	(⁴)	(⁴)	60	25	14	4
Dryers (non-coin-operated).....	4,364	943	201	52	478	24
Other drying equipment.....	-	-	(NA)	(NA)	(NA)	(NA)
Dryers (coin-operated).....	132	44	10	5	(NA)	(NA)
Other heaters, electric, storage type.....	(⁶)	(⁶)	(NA)	(NA)	(NA)	(NA)
Water heaters, electric, other.....	⁶ 3,212	⁶ 472	(NA)	(NA)	(NA)	(NA)
Water heaters, gas.....	3,562	566	(NA)	(NA)	(NA)	(NA)
Water heaters, non-electric, other than gas.....	154	27	(NA)	(NA)	(NA)	(NA)
Dishwashing machines, household.....	3,804	862	240	60	906	18
Floor polishers.....	609	72	61	8	59	3
Kitchen waste disposals.....	(D)	(D)	223	18	(NA)	(NA)
Household trash compactors.....	118	31	-	-	(NA)	(NA)
Sewing machines, household.....	-	-	50	12	4,387	296
Other household appliances.....	-	-	-	-	-	-
Electric water heater parts.....	(X)	15	-	-	-	-
Non-electric water heater parts.....	(X)	14	-	-	-	-
Dishing machine parts, household.....	(X)	38	-	9	-	14
Floor polisher parts.....	(X)	(D)	-	-	-	1
Food waster disposal parts.....	(X)	(D)	-	-	-	-
Trash compactor parts.....	(X)	(D)	-	-	-	-
Sewing machine parts, household.....	(X)	-	-	5	-	10
Other major household parts.....	(X)	(D)	-	-	-	-

See footnotes at end of table.

Table 6. SHIPMENTS, EXPORT, AND IMPORT, OF MAJOR HOUSEHOLD APPLIANCES: 1992 AND 1991—Continued

[Quantity in thousands of units; value in millions of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ^{1 2}		Imports for consumption ^{1 3}	
	Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	Value in foreign country
1991						
Electric ranges and ovens.....	3,942	956	173	51	1,027	95
Microwave ovens.....	3,459	486	507	80	4,642	437
Parts and accessories for electric ranges and ovens.....	(X)	173	(NA)	(NA)	(NA)	(NA)
Gas ranges and ovens.....	1,954	568	133	34	511	104
Parts for gas cooking stoves.....	(X)	41	(NA)	(NA)	(X)	15
Other cooking appliances(solid fuel).....	(NA)	(NA)	47	5	186	4
Other cooking appliances(liquid fuel).....	(NA)	(NA)	240	12	138	2
Other cooking appliances(gas fuel) (portable)....	2,650	267	211	18	706	11
Other cooking appliances(solid fuel) (portable)...	5,112	94	101	7	1,966	12
Parts and accessories for other cooking equipment.....	(X)	51	(X)	37	(X)	51
Compressor type refrigerator, fitted with separate doors:						
6.4 cu ft. and under (under 184 liters).....	(⁷)	(⁷)	12	6	17	2
6.5 to 9.4 cu ft. (184 liters but under 269 liters).....	⁷ 21	⁷ 5	7	4	1	-
9.5 to 13.4 cu ft. (269 liters but under 382 liters).....	89	22	12	6	56	1
13.5 cu ft. and over (382 liters and over).....	6,556	3,157	340	200	2	1
Non-compressor household refrigerator-freezers with separate external doors, all sizes.....	(D)	(D)	21	10	6	2
Compressor type, fitted with one external door:						
6.4 cu ft. and (under 184 liters).....	738	99	100	48	849	69
6.5 to 9.4 cu ft. 184 liters but under 269 liters).....	(⁸)	(⁸)	10	5	29	5
9.5 to 13.4 cu ft. (269 liters but under 382 liters).....	(⁸)	(⁸)	82	39	206	41
13.5 cu ft. and over (382 liters and over).....	⁸ 92	⁸ 33	266	133	6	2
Absorption, electrical fitted with one external door.....	(D)	(D)	8	3	68	28
Other household refrigerators.....	(D)	(D)	112	21	52	17
Freezers, upright type.....	635	166	51	20	65	14
Freezers, chest type.....	617	112	59	21	191	36
Fully automatic electric washing machines (coin-operated) ⁴	295	154	17	8	1	(Z)
Fully automatic electric washing machines (non-coin-operated).....	6,109	1,685	690	212	784	17
Other washing machines.....	(⁹)	(⁹)	38	16	2	2
Dryers (non-coin-operated).....	⁹ 4,055	⁹ 867	169	47	76	14
Other drying equipment.....	-	-	22	24	55	13
Dryers (coin-operated).....	110	44	7	4	1	1
Other heaters, electric, storage type.....	(¹⁰)	(¹⁰)	97	13	183	13
Water heaters, electric, other.....	¹⁰ 3,689	¹⁰ 447	251	14	2,154	14
Water heaters, gas.....	3,942	587	149	22	13	3
Water heaters, non-electric, other than gas.....	136	29	-	20	533	55
Dishwashing machines, household.....	3,624	825	234	60	619	10
Floor polishers.....	457	51	54	7	50	2
Kitchen waste disposals.....	(D)	(D)	207	16	2	1
Household trash compactors.....	113	27	-	-	-	-
Sewing machines, household.....	-	-	22	7	3,031	273
Other household appliances.....	-	-	-	-	-	-
Electric water heater parts.....	(X)	12	-	-	-	-
Non-electric water heater parts.....	(X)	13	-	-	-	9

See footnotes at end of table.

Table 6. **SHIPMENTS, EXPORT, AND IMPORT, OF MAJOR HOUSEHOLD APPLIANCES: 1992 AND 1991—Continued**

[Quantity in thousands of units; value in millions of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ^{1 2}		Imports for consumption ^{1 3}	
	Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	Value in foreign country
Dishwashing machine parts, household	(X)	41	-	9	-	13
Floor polisher parts	(X)	(D)	-	2	-	-
Food waster disposal parts	(X)	(D)	(NA)	(NA)	(NA)	(NA)
Trash compactor parts	(X)	(D)	(NA)	(NA)	(NA)	(NA)
Sewing machine parts, household	(X)	-	-	5	-	7
Other major household parts	(X)	(D)	-	-	-	-

-Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. (X) Not applicable.
(Z) Less than one.

¹For comparison of SIC-based product codes with Schedule B export numbers and HTSUSA import numbers, see appendix C.

²Source: Bureau of the Census report EM 545 *U.S. Exports*.

³Source: Bureau of the Census report IM 145 *U.S. Imports for Consumption*.

⁴Data combined to avoid disclosure of individual companies.

⁵Data combined to avoid disclosure of individual companies.

⁶Data combined to avoid disclosure of individual companies.

⁷Data combined to avoid disclosure of individual companies.

⁸Data combined to avoid disclosure of individual companies.

⁹Data combined to avoid disclosure of individual companies.

¹⁰Data combined to avoid disclosure of individual companies.

HISTORICAL NOTE

Data on major household appliances have been collected by the Bureau of the Census since 1968. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Carol Beasley, 301-763-5353 or Cynthia Ramsey, 301-763-5440.

8.3 CONSUMER ELECTRONICS

INTRODUCTION

These data cover companies engaged in the manufacture of home-type radio receivers, television sets, phonographs, high-fidelity components, and speakers in the United States. Very small firms (generally less than 10 employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies are excluded.

The statistics were collected by mail on Bureau of the Census annual Form MA36M, Radio and Television Receivers, Phonographs, and Related Equipment. The survey panel includes all known domestic manufacturers of these products, except the very small firms excluded from the scope of the survey. Approximately 160 companies are included. No estimate is derived for the small firms excluded from the survey.

SUMMARY OF FINDINGS

During 1992, the total value of shipments of consumer electronics was \$6.8 billion, an increase of 4 percent from the 1991 value of \$6.5 billion. The 1992 figure includes automotive audio equipment, \$395.5 million; household television receivers, \$4.7 billion; speakers, microphones, and home-type electronic kits, \$1.5 billion; and other consumer audio and video equipment, \$268.8 million.

EXPLANATION OF TERMS

See the Introduction for an explanation of terms.

Table 7. **VALUE OF SHIPMENTS OF CONSUMER ELECTRONICS, BY SELECTED PRODUCTS: 1982 TO 1992**

[Millions of current dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982
36511	Automotive audio equipment (except speakers) . . .	395.5	340.2	307.4	322.0	248.2	463.3	601.9	678.5	1,238.7	969.0	678.1
36512	Household television receivers, including combinations	4,663.5	4,562.0	4,642.6	4,737.7	3,986.2	3,729.3	4,000.1	3,970.2	4,120.4	3,681.5	3,324.0
36514	Other consumer audio and video equipment (except speakers)	268.8	294.5	347.4	373.4	385.4	289.5	151.1	154.5	165.5	225.2	335.7
36515	Speakers, microphones, and home-type electronic kits ¹	1,457.5	1,297.8	1,269.9	1,226.5	1,154.8	996.3	833.1	726.7	901.7	802.4	778.5

¹This product class should be considered in conjunction with product class 36632, "Broadcast, studio, and related equipment," as shown for 1984 and prior years.

Table 8. QUANTITY AND VALUE OF SHIPMENTS OF CONSUMER ELECTRONICS: 1992 AND 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
36511 —	Automotive audio equipment (except speakers) . . .	13	4,005,794	395,510	3,504,373	340,167
36511 34	AM-FM radios with tape player combinations . . .	4	2,015,480	248,894	1,767,353	206,397
36511 39	CD players and radio/CD combinations	1	(¹)	(¹)	-	-
36511 41	Other automobile audio equipment, including equalizers and amplifiers, excluding speakers .	12	¹ 1,990,314	¹ 146,616	1,737,020	133,770
36512 —	Household television receivers, including combinations	17	13,531,559	4,663,502	12,865,227	4,562,024
36512 18	High-definition television	-	-	-	-	-
36512 31	Projection television	13	(²)	(²)	(²)	(²)
	CRT-based color television:					
36512 41	50 cm (19.7 inches) and under	9	2,029,790	385,385	1,593,382	324,994
36512 51	Over 50 cm. (19.7 inches)	14	¹ 11,099,814	3,674,276	10,835,356	3,558,671
36512 61	Other household television receivers	1	² 401,955	² 603,841	² 436,489	² 678,359
36514 —	Other consumer audio and video equipment (except speakers)	46	1,689,475	³ 268,812	2,122,181	³ 294,504
36514 52	Coin-operated audio equipment	4	(D)	(D)	(D)	(D)
36514 61	Compact and video disc players	7	4,823	6,978	3,656	3,758
36514 78	Power amplifiers, including pre-amplifiers	23	333,688	142,984	286,514	128,521
36514 81	Receivers, tuners, and other consumer audio equipment incorporating radio reception	8	4,468	1,778	(D)	(D)
36799 07	Earphones, headsets, and phonograph cartridges, pickups, needles, and styli	17	(X)	39,834	(X)	34,193
36514 67	Equalizers	7	(D)	(D)	(D)	(D)
36514 69	Audio tape recorders and players	4	(D)	(D)	(D)	(D)
36514 83	Other consumer audio and video equipment (except speakers)	23	391,082	42,678	794,131	87,603
36515 —	Speakers, microphones, and home-type electronic kits	85	74,447,230	1,457,500	65,259,746	1,297,767
36515 51	Single loudspeakers mounted in an enclosure . .	21	2,267,375	192,095	1,664,805	173,100
36515 52	Multiple loudspeakers mounted in an enclosure .	32	5,485,097	494,193	4,883,546	444,045
36515 53	Other loudspeakers, including unmounted speakers sold separately	35	63,938,930	573,803	56,192,268	512,159
36515 55	Microphones	14	2,108,673	101,984	1,972,014	90,684
36515 67	Home-type electronic kits designed for consumer assembly	3	(⁴)	(⁴)	(⁴)	(⁴)
36515 94	Public address systems, including musical instrument amplifiers	21	⁴ 647,155	⁴ 95,425	⁴ 547,113	⁴ 77,779

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (X) Not applicable.

¹Product code 36511 39 (for 1992 only) is included with product code 36511 41 to avoid disclosing data for individual companies.²Product code 36512 31 is included with product code 36512 61 to avoid disclosing data for individual companies.³Total for product class 36514 does not include product code 36799 07.⁴Product code 36515 67 is included with product code 36515 94 to avoid disclosing data for individual companies.

Table 9. **SHIPMENTS, EXPORTS, AND IMPORTS OF CONSUMER AUDIO AND VIDEO ELECTRONICS: 1992**

[Quantity in number of units; value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Imports for consumption ²	
	Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	Value ³
Automotive audio equipment	4,005,794	395,510	1,658,718	256,834	17,552,218	1,372,494
Household television receivers.....	13,531,339	4,663,502	238,195	62,228	14,347,008	2,538,831
Coin-operated audio equipment, power amplifiers, audio tape recorders and players, compact and video disk players, equalizers, and other consumer audio and video equipment (except speakers)	2,080,557	271,646	(NA)	(NA)	37,842,135	2,452,497
Single loud speakers mounted in an enclosure .	2,267,375	192,095	(NA)	128,564	17,788,826	103,781
Multiple loud speakers mounted in an enclosure	5,485,097	494,193	1,250,618	75,137	4,527,167	132,545
Other loud speakers.....	63,938,930	573,803	(X)	146,544	107,760,366	382,270
Microphones.....	2,108,673	101,984	(X)	39,932	10,912,875	77,600
Home-type electronic kits designed for consumer assembly and public address systems, including musical instrument amplifiers.....	647,155	95,425	(X)	97,266	1,484,401	78,848
Earphones, headsets, and phonograph cartridges, pickups, needles, and styli	(X)	39,834	(NA)	28,126	(NA)	140,539

(NA) Not available. Data not collected separately or not adequately comparable.

(X) Not applicable.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.³This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first point of entry in the United States plus U.S. import duties.**HISTORICAL NOTE**

Data on radio and television receivers, phonographs, and related equipment have been collected by the Bureau of the Census since 1952. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Jack Matthews, 301-763-1513 or Ric Williamson, 301-763-7492.

Chapter 9. Industrial Equipment

9.1 STEEL SHIPPING DRUMS AND PAILS

INTRODUCTION

These data cover all companies engaged in the manufacture of steel shipping drums and pails. The reconditioning of containers is excluded.

The statistics were collected by mail on Bureau of the Census quarterly Form MQ34K, Steel Shipping Drums and Pails. The survey panel includes all known producers of steel shipping drums and pails, approximately 45 companies.

SUMMARY OF FINDINGS

During 1992, the value of shipments of steel pails totaled \$178.9 million, down 1 percent from the 1991 value

of \$180.4 million. Shipments of steel drums decreased by 5 percent, from \$668.7 million in 1991 to \$632.6 million in 1992. Revised quarterly data for 1992 are provided as part of this subsection.

EXPLANATION OF TERMS

Steel Pails. Single-walled shipping containers having capacities of 12 gallons or less, in both cylindrical and tapered form, and constructed of steel sheet of 29 gauge or heavier. Included are pails constructed with open tops as well as closed tops, flat and dome tops, tapered and straight sides, and lock and welded side seams.

Steel Shipping Drums. Single-walled cylindrical or bilged shipping containers, including overpacks for plastic containers, with a capacity greater than 12 gallons, and constructed of steel sheet 12 gauge and lighter.

Table 1. SUMMARY OF SHIPMENTS OF STEEL PAILS AND DRUMS: 1992 AND 1991

[Quantity in thousands of units; value in thousands of dollars]

Quarter and year	Steel pails		Steel drums	
	Number shipped	Value of products shipped	Number shipped	Value of products shipped
1992				
Total.....	76,794	178,850	33,336	632,616
Fourth quarter.....	16,636	37,864	7,954	148,532
Third quarter.....	20,244	45,794	8,885	171,741
Second quarter.....	21,180	49,980	8,573	162,617
First quarter.....	18,734	45,212	7,924	149,726
1991				
Total.....	72,645	180,408	33,970	668,692
Fourth quarter.....	15,614	37,924	7,998	156,090
Third quarter.....	18,537	45,180	8,694	172,460
Second quarter.....	20,136	50,762	8,963	177,261
First quarter.....	18,358	46,542	8,315	162,881

Table 2. QUANTITY AND VALUE OF SHIPMENTS OF STEEL PAILS AND DRUMS, BY PRODUCT AND BY QUARTER: 1992 AND 1991

[Quantity in thousands of units; value in thousands of dollars]

Product code	Product description	Total		First quarter		Second quarter		Third quarter		Fourth quarter	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992											
34121 01 34121 06	Steel pails	^b 76,794	^b 178,850	^b 18,734	^b 45,212	^b 21,180	^b 49,980	^b 20,244	^b 45,794	^b 16,636	^b 37,864
	11-1/4-inch diameter.	72,606	166,542	17,545	41,561	20,082	47,078	19,184	42,693	15,795	35,210
	Full removable head	^b 62,583	^b 135,712	^c 15,080	^b 33,765	^b 16,937	^b 37,209	^b 16,900	^b 35,729	^b 13,666	^b 29,009
34121 11 34121 13	Tight head (standard and dome top)	^a 10,023	^a 30,830	^b 2,465	^b 7,796	^a 3,145	^a 9,869	^a 2,284	^a 6,964	^a 2,129	^a 6,201
	14-inch diameter	^b 685	^a 4,770	^b 202	^b 1,429	^c 125	^b 860	^c 173	^b 1,234	^c 185	^b 1,247
	All other diameters	^c 3,503	^b 7,538	^c 987	^b 2,222	^c 973	^b 2,042	^c 887	^b 1,867	^c 656	^b 1,407
34122 01 34122 03	Steel drums and barrels	33,336	632,616	^a 7,924	^a 149,726	^b 8,573	^b 162,617	^a 8,885	^a 171,741	^b 7,954	^b 148,532
	14-inch diameter, all gauges	2,555	24,137	571	5,285	666	6,375	724	6,872	594	5,605
	Tight head	^a 228	^a 2,629	^b 65	^b 750	^b 65	^b 768	^b 57	^b 632	^b 41	^b 479
34122 05 34122 07	Open head, full or partial ..	2,327	21,508	^a 506	^a 4,535	^a 601	^a 5,607	^a 667	^a 6,240	^b 553	^b 5,126
	All other (except 14-inch diameter)	30,781	608,479	7,353	144,441	7,907	156,242	8,161	164,869	7,360	142,927
	20 gauge and heavier	27,584	563,596	6,461	131,698	7,144	145,734	7,363	153,868	6,616	132,296
34122 09 34122 11	50 gallon and larger, 18 gauge and heavier ..	11,841	266,374	2,564	58,008	3,098	68,210	3,273	76,835	2,906	63,321
	Tight head	7,675	164,034	^a 1,671	^a 35,478	^b 1,914	^a 40,076	^a 2,273	^a 51,758	^b 1,817	^b 36,722
	Open head	^a 4,166	^a 102,340	^b 893	^b 22,530	^b 1,184	^b 28,134	^b 1,000	^b 25,077	^b 1,089	^b 26,599
34122 13 34122 15	50 gallon and larger, 19 and 20 gauge, including 20/18	14,634	278,384	3,607	68,835	3,728	72,093	3,835	72,637	3,464	64,819
	Tight head	11,894	220,554	^a 2,970	^a 55,346	^a 3,061	^a 57,821	^a 3,083	^a 56,873	^b 2,780	^b 50,514
	Open head	2,740	57,830	^b 637	^b 13,489	^b 667	^b 14,272	^b 752	^b 15,764	^b 684	^b 14,305
34122 17 34122 19	30 to 49 gallon	^a 863	^a 15,256	^b 226	^b 3,981	^b 251	^b 4,415	^a 199	^b 3,567	^b 187	^b 3,293
	Under 30 gallon	246	^a 3,582	^b 64	^b 874	^b 67	^b 1,016	^b 56	^b 829	^b 59	^b 863
	Lighter than 20 gauge.	3,197	44,883	892	12,743	763	10,508	798	11,001	744	10,631
34122 19	30 gallon and larger	2,220	35,911	612	10,164	531	8,394	561	8,811	^a 516	^a 8,542
	Under 30 gallon	977	8,972	^b 280	^b 2,579	^b 232	^b 2,114	^b 237	^b 2,190	^b 228	^b 2,089
1991											
34121 01 34121 06	Steel pails	^a 72,645	^a 180,408	^b 18,358	^b 46,542	^b 20,136	^b 50,762	^b 18,537	^b 45,180	^b 15,614	^b 37,924
	11-1/4-inch diameter.	68,689	168,639	17,175	43,108	19,154	47,878	17,602	42,408	14,758	35,245
	Full removable head	^a 59,017	^a 136,641	^c 14,669	^b 34,480	^c 16,589	^b 39,192	^c 15,285	^b 34,718	^c 12,474	^b 28,251
34121 11 34121 13	Tight head (standard and dome top)	^a 9,672	^a 31,998	^b 2,506	^b 8,628	^b 2,565	^b 8,686	^b 2,317	^b 7,690	^b 2,284	^b 6,994
	14-inch diameter	697	4,664	^c 200	^b 1,305	^b 168	^b 1,120	^b 160	^b 1,058	^b 169	^b 1,181
	All other diameters	^b 3,259	^a 7,105	^c 983	^b 2,129	^c 814	^b 1,764	^c 775	^b 1,714	^c 687	^b 1,498
34122 01 34122 03	Steel drums and barrels	33,970	668,692	^b 8,315	^b 162,881	^b 8,963	^b 177,261	^b 8,694	^b 172,460	^b 7,998	^b 156,090
	14-inch diameter, all gauges	3,390	46,600	809	11,840	896	12,666	886	11,646	799	10,448
	Tight head	787	14,620	^c 195	^c 3,631	^c 207	^c 3,846	^c 208	^c 3,911	^c 177	^c 3,232
34122 05 34122 07	Open head, full or partial ..	^a 2,603	^a 31,980	^c 614	^c 8,209	^c 689	^c 8,820	^b 678	^b 7,735	^b 622	^b 7,216
	All other (except 14-inch diameter)	30,580	622,092	7,506	151,041	8,067	164,595	7,808	160,814	7,199	145,642
	20 gauge and heavier	27,127	578,592	6,604	139,596	7,193	153,679	6,963	150,147	6,367	135,170
34122 09 34122 11	50 gallon and larger, 18 gauge and heavier ..	11,573	274,639	2,748	64,028	3,087	73,256	3,009	72,718	2,729	64,637
	Tight head	7,649	172,528	^b 1,771	^b 38,507	^b 2,090	^b 47,446	^b 2,057	^b 47,848	^b 1,731	^b 38,727
	Open head	3,924	^a 102,111	^b 977	^b 25,521	^c 997	^c 25,810	^b 952	^b 24,870	^b 998	^b 25,910
34122 13 34122 15	50 gallon and larger, 19 and 20 gauge, including 20/18	14,343	282,665	3,535	70,016	3,774	74,769	3,667	72,469	3,367	65,411
	Tight head	11,738	^a 225,841	^b 2,897	^b 56,053	^b 3,091	^b 59,955	^b 3,017	^b 58,156	^b 2,733	^b 51,677
	Open head	2,605	56,824	^b 638	^b 13,963	^b 683	^b 14,814	^b 650	^b 14,313	^b 634	^b 13,734
34122 17 34122 19	30 to 49 gallon	^a 955	^a 17,558	^b 260	^b 4,673	^b 244	^b 4,365	^b 228	^b 4,082	^b 223	^b 4,438
	Under 30 gallon	256	^a 3,730	^b 61	^b 879	^b 88	^b 1,289	^b 59	^b 878	^b 48	^b 684
	Lighter than 20 gauge.	3,453	43,500	902	11,445	874	10,916	845	10,667	832	10,472
34122 19	30 gallon and larger	¹ 3,453	¹ 43,500	¹ 902	¹ 11,445	¹ 874	¹ 10,916	¹ 845	¹ 10,667	¹ 832	¹ 10,472
	Under 30 gallon	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)

Note: The percent of estimation of each item is indicated as follows: ^a10 to 25 percent of this item is estimated. ^b26 to 50 percent of this item is estimated. ^cOver 50 percent of this item is estimated.

¹Data for product code 34122 19 are included with data for product code 34122 17 to avoid disclosing figures for individual companies.

Table 3. **SHIPMENTS, EXPORTS, AND IMPORTS OF STEEL SHIPPING PAILS AND DRUMS: 1992 AND 1991**

[Value in thousands of dollars]

Product code	Product description	Manufacturers' shipments (value f.o.b. plant)	Exports of domestic merchandise ¹ (value at port)	Value of imports for consumption ²
34121 00	Steel shipping pails:			
	1992	178,850	178,430	44,180
	1991	180,408	102,730	35,454
34122 00	Steel shipping drums:			
	1992	632,616	11,069	10,907
	1991	668,692	14,196	12,510

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.**HISTORICAL NOTE**

Data on steel shipping drums and pails have been collected by the Bureau of the Census since 1924. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

FUNDING

The MQ34K survey is funded, in part, by the Steel Shipping Container Institute.

CONTACT FOR DATA USERS

For additional information about these data, contact Michael Yamaner, 301-763-7866.

9.2 SELECTED INDUSTRIAL AIR POLLUTION CONTROL EQUIPMENT

INTRODUCTION

These data cover firms engaged in the manufacture of selected industrial air pollution control equipment. The statistics in this publication were collected by mail on Bureau of the Census annual Form MA35J, Selected Air Pollution Control Equipment. The survey panel includes all known manufacturers of the selected products specifically designed for use in air pollution control, approximately 116 companies.

SUMMARY OF FINDINGS

Shipments of industrial air pollution devices in 1992 totaled \$713.4 million, of which \$463.3 million were particulate emissions collectors, \$196.9 million were gaseous emissions control devices, and \$53.2 million were other types of air pollution control equipment. Shipments decreased by 13 percent from the 1991 level of \$817.8 million.

New orders decreased by 8 percent in 1992 to \$781.2 million. Backlog of orders increased by 10 percent in 1992 to \$754.1 million.

EXPLANATION OF TERMS

Net New Orders (Bookings). Orders received during the year minus all cancellations received during the same year. Net new orders are defined to include (a) the sales value of orders accepted during the reporting period for products and services to be delivered at some future date; (b) plus the sales value of orders received during the reporting period for immediate delivery; (c) plus or minus the net sales value of contract change documents which increase, decrease (or equal) the sales values of previous orders when the parties concerned are in substantial agreement as to the amount involved. Included as orders are only those orders that are supported by binding legal documents, such as signed contracts, letters or awards, or letters of intent. In the case of letters of intent, the full amount of sales value is included if the parties concerned were in substantial agreement on this amount; otherwise, only the funds specially authorized to be expended are included. Orders received and canceled during the year are excluded.

Backlog of Orders. All orders that have not yet been reflected as shipments. Generally, unfilled orders at the end of the reporting period are equal to unfilled orders at the end of the prior period, plus net new orders received, less net shipments.

Particulate Emissions Collectors

Electrostatic Precipitator. A device which separates aerosol particulate matter (solid or liquid) from industrial gases by imparting an electric charge to the particles and removing them from the gas stream with the force created by an electric field.

Fabric Filter. A device in which the dustbearing gas is passed through a fabric in such a manner that the dust particles are retained on the up stream or "dirty" gas side of the fabric, while the cleaned gas passes through the fabric to the down stream or clean gas side, where it is removed by natural and/or mechanical means. The fabric may be of any fibrous material, natural or manmade.

Mechanical Collector. A device for the separation in a dry state of entrained particulate material from a gas stream by the application of one or a combination of the following forces: centrifugal, inertial, and gravitational.

Wet Scrubber. A device for the removal of particulate contaminants from a gas stream by means of intimate contact with scrubbing liquid. (If water is added in any form, consider it a scrubber, except wetted wall electronic precipitators and those devices which are primarily mechanical collectors.)

Gaseous Emissions Control Devices

Catalytic Oxidation Systems. A device for the removal of combustible air contaminants in which the contaminant-laden stream is preheated by a suitable heating mechanism. The contaminant-laden stream is then passed through a catalyst bed that initiates and promotes oxidation of the combustible contaminants to carbon dioxide, water vapor, and other compounds less noxious than those originally in the gas stream.

Thermal and Direct Oxidation Systems

Thermal Oxidation System. A device for the correction of combustible air contaminants in which the contaminant-laden gas stream is passed over a burner or other suitable preheat devices to a thermal residence chamber where the contaminant materials are oxidized, to carbon dioxide, water vapor, and other materials less noxious than those originally in the gas stream.

Direct Oxidation System. A device for the destruction of concentrated combustible or oxidant streams in which the air contaminant is reacted directly with a fuel or with oxidizing air in a burner flame, and the products of combustion are exhausted into the atmosphere directly or through a suitable incineration chamber and stack.

Scrubber (Gas Absorber). A device for the removal of soluble or reactive gaseous material from gas streams by contacting the stream with water, aqueous chemical solution, or other scrubbing liquids. The process involves a chemical reaction.

Flue Gas Desulfurization Systems (FGD). Chemical process plants designed primarily for the removal of sulfur oxides from gaseous products of combustion emitted to the atmosphere from the use of fossil fuels, in boilers or other combustion devices operated for the generation of

thermal or combustion devices operated for the generation of thermal or electric energy. The system extends from gas inlet to gas discharge, including all required auxiliaries and controls.

Gas Absorber. A device for the removal of air contaminants by absorption on a surface-active solid, such as activated carbon or molecular sieves. Depending on the application, the absorbent is either discarded or regenerated.

Table 4. NEW ORDERS, SHIPMENTS, AND BACKLOG OF ORDERS FOR SELECTED INDUSTRIAL AIR POLLUTION CONTROL EQUIPMENT: 1992 AND 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	New orders		Shipments		Backlog of orders, December 31	
			Quantity	Value	Quantity	Value	Quantity	Value
	1992							
35646 —	Selected industrial air pollution control equipment.....	100	(X)	781,219	(X)	713,429	(X)	754,053
	Particulate emissions collectors.....	(X)	(X)	422,092	(X)	463,288	(X)	255,130
35646 51	Electrostatic precipitators.....	19	225	123,829	236	152,741	86	137,673
35646 54	Fabric filters.....	51	43,361	218,69	42,059	228,143	5,530	61,467
35646 55	Mechanical collectors.....	35	3,674	39,989	3,597	43,192	703	18,265
35646 58	Wet scrubbers.....	32	1,225	39,580	1,101	39,212	690	37,725
	Gaseous emissions control devices.....	(X)	(X)	292,403	(X)	196,899	(X)	422,844
35646 70	Catalytic oxidation systems.....	7	124	22,270	104	18,722	66	10,861
35646 72	Thermal and direct oxidation systems.....	11	263	30,725	258	28,897	62	12,015
35646 73	Scrubbers (gas adsorber).....	12	812	33,784	597	19,782	302	17,853
35646 74	Wet flue gas desulfurization systems AND.....	4						
35646 75	Dry flue gas desulfurization systems.....	5	29	180,648	28	120,290	34	339,150
35646 76	Gas adsorbers.....	8	46	24,976	37	9,208	26	42,965
35646 79	Other types of industrial air pollution control equipment.....	19	(X)	66,724	(X)	53,242	(X)	76,079
	1991							
35646 —	Selected industrial air pollution control equipment.....	103	(X)	846,557	(X)	817,833	(X)	684,296
	Particulate emissions collectors.....	(X)	(X)	493,990	(X)	496,041	(X)	294,359
35646 51	Electrostatic precipitators.....	18	181	195,941	174	149,063	90	165,397
35646 54	Fabric filters.....	54	35,332	224,907	40,271	248,437	4,218	70,235
35646 55	Mechanical collectors.....	34	4,108	43,128	5,807	47,033	626	21,528
35646 58	Wet scrubbers.....	34	1,050	30,014	1,116	51,508	563	37,199
	Gaseous emissions control devices.....	(X)	(X)	255,174	(X)	226,871	(X)	327,338
35646 70	Catalytic oxidation systems.....	7	143	18,376	111	14,832	46	7,311
35646 72	Thermal and direct oxidation systems.....	10	255	22,050	312	29,084	57	10,187
35646 73	Scrubbers (gas adsorber).....	12	556	14,085	589	18,354	87	3,851
35646 74	Wet flue gas desulfurization systems AND.....	4						
35646 75	Dry flue gas desulfurization systems.....	5	33	178,975	26	139,107	33	278,878
35646 76	Gas adsorbers.....	8	52	21,688	60	25,494	17	27,111
35646 79	Other types of industrial air pollution control equipment.....	20	(X)	97,393	(X)	94,921	(X)	62,599

*Revised by 5 percent or more from previously published figures.

(X) Not applicable.

Table 5. **VALUE OF SHIPMENTS OF SELECTED AIR POLLUTION CONTROL EQUIPMENT, BY END USE: 1992 AND 1991**

[Thousands of dollars]

Product description	Particulate emissions collectors		Gaseous emissions control devices		Other types of industrial air pollution control equipment	
	1992	1991	1992	1991	1992	1991
Shipments.....	463,288	496,041	196,899	226,871	53,242	97,921
Steam electric utility power plants.....	96,228	72,393	(D)	(D)	(D)	74,501
Steam industrial power plants.....	17,986	21,024	(D)	(D)	(D)	(D)
Coal mining and cleaning.....	4,860	3,365	(D)	(D)	-	-
Petroleum refining.....	32,347	41,187	(D)	(D)	(D)	(D)
Foundries.....	4,200	4,091	(D)	(D)	(D)	-
Iron and steel mills.....	5,493	6,576	(D)	(D)	(D)	(D)
Primary nonferrous metal smelting plants.....	6,894	7,319	(D)	(D)	(D)	(D)
Chemical and fertilizer production.....	58,593	64,357	9,253	6,344	(D)	(D)
Cement manufacturing.....	14,083	15,002	-	-	(D)	(D)
Grain milling and handling.....	5,271	5,563	(D)	-	(D)	(D)
Pulp and papermill operations.....	35,714	47,421	(D)	(D)	(D)	-
Municipal waste combusters.....	2,548	5,157	(D)	(D)	(D)	(D)
Other end use industries.....	179,071	202,586	48,775	55,214	27,064	17,683

- Represents zero.

(D) Data withheld to avoid disclosing figures for individual companies.

*Revised by 5 percent or more from previously published figures.

HISTORICAL NOTE

Data on selected air pollution control equipment have been collected by the Bureau of the Census since 1971. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Richard Wiesler, 301-763-7867 or Carol Beasley, 301-763-5434.

9.3 AIR-CONDITIONING AND REFRIGERATION EQUIPMENT

INTRODUCTION

The data in this subsection cover firms engaged in the manufacture of refrigeration, air conditioning equipment, and nonelectric warm air furnaces. The statistics in this publication were collected by mail on Bureau of the Census annual Form MA35M, Refrigeration and Air Conditioning Equipment, Including Warm Air Furnaces. The survey panel includes all known producers of these products, approximately 355 companies.

SUMMARY OF FINDINGS

In 1992, the value of shipments of heat transfer equipment increased by 8 percent to \$4,237.2 million, compared with the 1991 figure of \$3,925.4 million. Unitary air-conditioners increased by 4 percent to \$3,684.7 million, from the 1991 level of \$3,533.0 million. Compressors and compressor units increased by 14 percent to \$2,646.1 million, compared with \$2,317.1 million in 1991. The value of shipments of condensing units, refrigeration (complete), decreased by 2 percent to \$207.2 million, from the 1991 level of \$210.4 million. Room air-conditioners showed an increase of 1 percent in 1992 with \$817.3 million shipped, compared with the \$811.8 million shipped in 1991. Nonelectric warm air furnaces and humidifiers had a value of shipments for 1992 of \$1,190.3 million, a 24-percent increase over the 1991 value of \$957.3 million.

EXPLANATION OF TERMS

Open-Type Condensing Unit. A specific refrigerating combination for a given refrigerant, consisting of a compressor with an extended shaft for an external drive, a condenser, a liquid receiver (when required), and the regularly furnished accessories. Includes units for household refrigerators and freezers.

Hermetic-Type Condensing Unit. A specific refrigerating combination for a given refrigerant, consisting of a compressor and a motor, both of which are enclosed in the same housing, with no external shaft or shaft seal; the compressor motor operating in the refrigerant atmosphere; a condenser; a liquid receiver (when required); and the regularly furnished accessories. The compressor and compressor motor housing may be either the fully welded or brazed type, or the service-sealed type. Includes units for household refrigerators and freezers.

Hermetic-Type Motor Compressors. Consists of a mechanical compressor and motor, both of which are enclosed in the same housing, with no external shafts or shaft seals, a

motor that operates in the refrigerant atmosphere, and uses a refrigerant other than ammonia. Includes units for household refrigerators and freezers.

Open-Type Compressors. An open-type compressor (with or without motor) is a specific machine for compressing a given refrigerant vapor. This machine consists of a compressor with an extended shaft for an external drive. Includes units for household refrigerators and freezers.

Ammonia Compressor. A compressor in which increase in ammonia vapor is attained by changing the internal volume of the compression chamber.

Heat Transfer Equipment

Evaporative Condensers. Consists of a condensing coil, spray system and pump (if furnished), a means for air circulation (including drive if furnished), and frame and enclosure.

Room Fan-Coil Air-Conditioning Units. Units which are factory-made assemblies providing the functions of circulation, cooling, or heating, and filtering of air, but not including the source of cooling or heating.

Room Air-Induction Units. Consists of a cooling coil, or cooling and heating coil, and a means for delivering preconditioned air (received under pressure from an external source, mixed with recirculated air) to the space being conditioned.

Packaged Terminal Air-Conditioners. Factory selected combinations of heating and cooling components or assemblies, intended to serve an individual room, and comprising: (1) heating assembly available with elements for use with hot water, steam, and electricity; means for forced heated air circulation and distribution; integral or remote temperature controls; (2) slide-in cooling section with complete refrigerant cycle; (3) room cabinet; (4) provision for outdoor air intake and discharge and accessories as required for mounting in a building wall; (5) provisions for air filtration and ventilation; (6) permanent individual branch circuit wiring with a suitable line cord or terminating at a junction box with the room cabinet; and (7) provisions for free conditioned air distribution or, when forced circulation is employed for minimal duct work, have a total external static resistance not exceeding 1/10 inch of water.

Packaged Terminal Heat Pumps. Packaged terminal heat pumps are a separate unencased refrigeration system installed in a cabinet of similar function and configuration to that of a packaged terminal air-conditioner. It utilizes reverse cycle refrigeration as its prime heat source and should have other supplementary heat source availability.

Unit Coolers, Refrigeration, All Types. Equipment in suitable enclosures with refrigerant or brine coils, fans, fan motor and drive; with or without refrigerant control; with or without sprays, pump, and defroster. This unit is also known as a forced air evaporator.

Air-Cooled Refrigerant Condensers, Remote-Type. Condensing coil, a means for air circulation (including drive if furnished, frame, and enclosure).

Miscellaneous Heat Transfer Equipment

Shell-and-Tube, Shell-and-Coil, Shell-and-U-Tube, Tube-in-Tube Condensers

General. A water-cooled refrigerant condenser is a factory-made assembly of elements by which the flows of refrigerant vapor and water are maintained in such a heat transfer relationship that the refrigerant vapor is condensed into a liquid.

Shell-and-Tube Refrigerant Condenser. One in which the refrigerant vapor is condensed either on the inside or on the outside of a group of straight parallel tubes within a closed shell, with the tubes terminating at each end in a tube sheet.

Shell-and-U-Tube Refrigerant Condenser. One in which the refrigerant vapor is condensed in a closed shell, with the cooling water circulated through a tube bundle consisting of U-tubes terminating in a single tube sheet.

Tube-in-Tube Refrigerant Condenser. One or more assemblies of two tubes, one within the other, in which the refrigerant vapor is condensed either in the annular space or in the inner tube.

Shell-and-Coil Refrigerant Condenser. One in which the refrigerant vapor is condensed in a closed shell, with the cooling water circulated through one or more continuous or assembled coils contained within the shell.

Shell-and-Tube, Shell-and-Coil, Shell-and-U-Tube, Liquid Coolers

General. A factory-made assembly of elements in which the liquid and the refrigerant are in heat transfer relationship, causing the refrigerant to evaporate and the liquid to be cooled.

Shell-and-Tube Liquid Cooler. Heat transfer is effected through a group of straight parallel tubes within a closed shell, with the tubes terminating at both ends of the cooler.

Shell-and-U-Tube Liquid Cooler. Heat transfer is effected through a U-tube bundle in a closed shell; the U-tubes terminate at one end of the cooler.

Tube-in-Tube Liquid Cooler. One or more assemblies of two tubes, one within the other, in which the heat transfer is effected through the inner tube or tubes.

Shell-and-Coil Liquid Cooler. Heat transfer is effected through one or more continuous or assembled coils contained within a closed shell.

Liquid-Suction Heat Exchanger. A device used to transfer heat from the refrigerant liquid to the suction gas. Such devices may be of the following types: shell-and-coil, tube-in-tube, finned-tube-in-tube, etc.

Refrigerant Liquid Receiver. A vessel, permanently connected to a refrigerant system by inlet and outlet pipes, for storage of a liquid refrigerant.

Central System Finned Coils, Air-Conditioning and Refrigeration Type, Used With, but Not Including, Means for Air Circulation. One or two row coils are considered as "heating only" coils. Three or more row coils are considered as "cooling and/or heating" coils.

OEM Coil Sales Intended for Resale or Assembly into Equipment by Other Manufacturers (All Types). Includes shipments of coils to private branders and OEM accounts, as well as those finned coils that are intended for resale or for assembly into equipment by other manufacturers.

Factory-Assembled, Refrigeration-Type, Finned Gravity Coils. Includes all types of (1) flat or shaped plate surface type heat exchangers for use with volatile refrigerants, eutectic solutions, or brine and (2) extended surface heat exchangers consisting of tube or pipe prime surface and finned secondary surface, generally used for refrigeration in either frosted or not frosted operation, and usually without forced circulation of the substance being refrigerated. These include bunker and gravity-type evaporators.

Wetted-Surface Dehumidifiers. Consists of a suitable enclosure containing cooling coils or means for liquid spray over the cooling coils and tank but without means for air circulation provided as an integral part of the unit. The unit may include a recirculating water pump, eliminator plates, and inlet deflectors.

Packaged Unitary Air-Conditioning Equipment, Except Room Air-Conditioners

Year-Round Air-Conditioners, Single Package. Factory-made assemblies of one or more condensing units or absorption refrigeration units, heat-generating units (such as electric, gas, or oil-fired furnace), and means for air-cooling, dehumidifying, heating, cleaning, and forcing circulation of air through a duct system, which may also have a means for humidifying and controlling temperature.

Year-Round Air-Conditioners, Remote-Condenser Type. All units which have the condenser located remotely from the equipment described above.

Air Source Heat Pumps. A heat pump that transfers heat from outdoor air to an indoor air circulation system.

Heat Pumps, Single Package. Factory-made assemblies of one or more condensing units and evaporators and with the means for air circulation, ventilation, and cleaning, with provision for modifying the performance so that either heating, or cooling and dehumidification may be produced.

Heat Pumps, Split Systems. All units which have the coil located remotely from the equipment described above.

Water Source Heat Pump. A factory-made assembly which normally includes an indoor conditioning coil with air moving means, compressor(s) and refrigerant-to-water heat exchanger(s), including the means to provide both cooling and heating functions. When such equipment is provided in more than one assembly, the separate assemblies shall be designed to be used together, and the rating requirements outlined in the standard are based upon the use of matched assemblies.

Split System Air-Conditioning Units (Air-Conditioning Condensing Units Only). Units assembled in factory-made enclosures and consisting of a motor-driven compressor, a condenser, and possibly a liquid receiver.

Recreational Vehicle Air-Conditioning Units. Designed for application to a recreational vehicle, as defined in American National Standard for Recreational Vehicles (American National Standards Institute Standard A119.2) (NFPA 501C), and which consists of one or more factory-made assemblies which normally include an evaporator or cooling coil, and a compressor and condenser combination. These air-conditioning units may include a heating function as well. Where such equipment is provided in more than one assembly, the separated assemblies shall have been designed to be used together, and the requirements of rating outlined in this standard are based upon the use of matched assemblies.

Split System Air-Conditioning Coil With Blower. Factory-made assemblies of a coil (supplied with cooling media from an external source), without a means for air circulation, and those which may have provision for the introduction of outside air.

Split System Air-Conditioning Coil Without Blower. Factory-made assemblies which include only a coil (supplied with cooling media from an external source), without a circulating fan, for use with heating equipment incorporating a fan.

Other Air-Conditioning and Refrigeration Equipment

Centrifugal Liquid-Chilling Packages. Factory-made assemblies of one or more centrifugal or screw compressors,

condensers, liquid coolers, controls, component parts, with motor compressor (if hermetic), or without drive or prime mover (if open). The hermetic centrifugal horsepower should be the maximum brake horsepower for which the motor is rated. The open centrifugal horsepower should be the maximum brake horsepower for which the motor or turbine drive, to which the machine is intended to be connected, is rated.

Ice-Making Machine. A factory-made assembly (not necessarily shipped in one package) consisting of a condensing unit and ice-making section operating as an integrated unit, with means for making and harvesting ice. It may also include means for storing or dispensing ice, or both.

Self-Contained Ice-Making Machine. A model in which the ice-making mechanisms and storage compartment are in an integral cabinet.

Absorption Liquid-Chilling Systems. Those systems of 25 tons and over that cool and dehumidify the air by means of cold contact surface, in the same manner as a compression system. (This is the closed-type absorption system.)

Absorption Systems. A system utilizing the process by which gas is taken up by the capillaries and extended surface of a porous material.

Open-Type Absorption Systems. A system which dehumidifies by bringing the air into direct contact with the absorbent.

Central Station Air-Handling Unit. A factory-made, encased assembly consisting of a fan or fans and the other necessary equipment to perform one or more of the functions of circulating, cleaning, heating, cooling, humidifying, dehumidifying, and mixing of air, but that does not include a source for heating or cooling.

Factory Fabricated Water-Cooling Towers. Factory fabricated cooling towers are those towers that are prefabricated by the manufacturers, and shipped either as a factory-assembled section (i.e., cell) or as major components (e.g., casing, fan, precut fill) for assembly at the site of the installation.

Mobile Vehicle Refrigeration and Air-Conditioning Systems. An assembly of refrigeration compressor apparatus with suitable power source for use when the vehicle is in motion or not in motion; means for air-cooling and dehumidification; means for air circulation, ventilation, and air-cleaning; interconnecting refrigerant piping; and refrigerant and temperature control apparatus, for mounting on the vehicle. The system may or may not have provision for heating.

Reciprocating Liquid-Chilling Packages. Factory-made assemblies of one or more reciprocating compressors, condensers, and water or brine coolers, with interconnections, base, and accessories. These assemblies may be furnished with or without refrigerant, drive, and prime mover.

Mechanical Drinking Water Cooler. A factory-made assembly, in one structure, that includes a complete mechanical refrigerating system, and that has the primary function of cooling potable water, and also provides for dispensing such water, by either integral or remote means, or both.

Electrically Operated Dehumidifiers, Mechanically Refrigerated, Self-Contained. A factory-made assembly of a condensing unit and means for air-circulation, dehumidification, and condensate collection.

Nonelectric Warm Air Furnace. A device for the transfer of heat, generated by the combustion of fuel within the

device, or by radiation from an electric heating element, to air that flows between the combustion chamber and an outer enclosure to pipes or ducts that carry the heat to the desired location. In a gravity air flow furnace, the warm air rises by gravity. In a forced air furnace, the warm air is circulated by a motor-driven blower.

Humidifiers. Furnace or duct-mounted device installed in the supply or return-air plenum of a residential warm air furnace or in a supply or return air duct of a warm air heating system.

Table 6. **SUMMARY OF SHIPMENTS OF REFRIGERATION, AIR-CONDITIONING, AND WARM AIR HEATING EQUIPMENT: 1992 AND 1991**

[Value in thousands of dollars]

Product code	Product description	1992	1991
35851 —	Heat transfer equipment	4,237,174	3,925,409
35852 —	Unitary air-conditioners	3,684,711	3,532,970
35853 pt.	Commercial refrigeration equipment	161,610	147,875
35854 —	Compressors and compressor units	2,646,058	2,317,053
35855 —	Condensing units, refrigeration (complete)	207,165	210,372
35856 —	Room air-conditioners and dehumidifiers	817,298	811,751
3585c pt.	Nonelectric warm air furnaces and humidifiers	1,190,330	957,333

pt. Partial.

Table 7. QUANTITY AND VALUE OF SHIPMENTS OF REFRIGERATION, AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT: 1992 AND 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35851 —	Heat transfer equipment (except room and unitary air-conditioners)	249	(X)	4,237,172	(X)	3,925,409
35851 01	Packaged terminal air-conditioners ¹	7	65,656	38,107	'53,567	'32,374
35851 03	Packaged terminal heat pumps	6	55,438	31,457	'49,653	'28,248
	Evaporative condensers	(X)	2,108	40,888	2,198	38,456
35851 04	100 tons and under	7	380	2,762	407	2,903
35851 07	Over 100 tons	9	1,728	38,126	1,791	35,553
	Room fan-coil air-conditioning units	(X)	198,302	97,212	269,571	119,989
35851 08	Vertical stack	4	19,889	8,143	'26,447	'11,015
35851 09	Vertical	7	91,076	58,103	'125,791	'69,620
35851 10	Horizontal	9	87,337	30,966	'117,333	'39,354
35851 11	Room air induction units	3	(D)	(D)	(D)	(D)
	Central station air-handling units (motor-driven fan type)	(X)	71,099	365,132	67,772	341,284
35851 13	Draw through	22	52,357	307,291	48,480	272,204
35851 15	Blow through	11	7,826	36,123	7,422	39,462
35851 17	Heating and ventilating	15	10,916	21,718	11,870	29,618
	Coolers (refrigeration):					
	Ceiling, wall-mounted, and floor-mounted unit coolers	(X)	176,553	108,133	164,629	99,588
35851 18	1,000 Btuh AND	5				
35851 19	1,001 to 2,000 Btuh	5	49,565	6,700	47,485	6,345
35851 20	2,001 to 4,000 Btuh	6	13,499	2,712	12,604	2,700
35851 21	4,001 to 6,000 Btuh	8	10,055	2,654	9,376	'2,409
35851 22	6,001 to 8,000 Btuh	8	18,771	6,129	17,637	5,650
35851 23	8,001 to 12,000 Btuh	9	33,571	15,788	31,526	14,089
35851 24	12,001 to 18,000 Btuh	9	23,672	16,863	20,588	13,443
35851 25	Over 18,000 Btuh	14	27,420	57,287	25,413	54,952
	Air cooled refrigerant condensers (remote type)	(X)	21,984	51,081	20,056	44,508
35851 30	Under 30 tons	11	16,310	13,734	15,185	13,610
35851 32	30 to 50 tons	11	2,012	8,306	1,536	5,704
35851 34	Over 50 tons	11	3,662	29,041	3,335	25,194
	Miscellaneous heat transfer equipment:					
	Shell-and-tube, shell-and-coil, shell-and-u-tube, tube-in-tube	(X)	(X)	71,897	(X)	66,202
35851 35	Condensers	10	(X)	41,516	(X)	39,763
35851 36	Liquid coolers	10	(X)	30,381	(X)	26,439
35851 37	Liquid-suction heat exchangers and refrigerant liquid receivers	8	(X)	(D)	(X)	(D)
	Central system finned coils (air-conditioning and refrigeration type)	(X)	(X)	85,438	(X)	91,365
35851 38	Standard steam and steam distributing tube	16	(X)	17,241	(X)	17,699
35851 39	Standard water cooling and/or heating and cleanable tube water	21	(X)	62,870	(X)	65,821
35851 40	Volatile refrigerant cooling	15	(X)	5,327	(X)	7,845
	Coil sales by original equipment manufacturers intended for resale or assembly into equipment by other manufacturers (all types)	(X)	(X)	370,911	(X)	345,356
35851 41	Copper (only)	6	(X)	(²)	(X)	(²)
35851 42	Copper and aluminum	19	(X)	219,453	(X)	215,549
35851 43	Aluminum (only)	10	(X)	95,608	(X)	80,602
35851 44	Other, including steel	10	(X)	55,850	(X)	'49,205
35851 45	Factory-assembled, refrigeration type, finned gravity coils, including wetted-surface dehumidifiers	5	(X)	10,610	(X)	9,886
	Centrifugal liquid chilling packages	(X)	5,538	359,932	4,646	337,229
	Hermetic type	(X)	(D)	(D)	(D)	(D)
35851 47	200 hp and under	4	(D)	(D)	(D)	(D)
35851 49	201 to 300 hp	4	896	44,543	853	41,726
35851 50	301 to 400 hp	4	501	31,185	507	30,172
35851 53	Over 400 hp	4	1,307	129,752	1,364	125,425
35851 55	Open type(all sizes)	2	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 7. QUANTITY AND VALUE OF SHIPMENTS OF REFRIGERATION, AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35851 —	Heat transfer equipment (except room and unitary air-conditioners)—Cont.					
	Ice-making machines	(X)	159,627	210,317	166,450	208,261
	Self-contained ice-cube makers	(X)	102,370	105,822	110,753	106,344
35851 62	Automatic, 200 lb and under	6	57,297	33,606	54,419	31,723
35851 63	Automatic, 201 lb to 350 lb AND	4				
35851 65	Automatic, over 350 lb	5	45,073	72,216	56,334	74,621
	Self-contained flake or chip machines	(X)	8,933	17,407	11,363	22,535
35851 68	300 lb and under	5	5,327	8,220	7,546	12,544
35851 70	Over 300 lb	9	3,606	9,187	3,817	9,991
35851 71	Not self-contained	10	38,252	62,563	35,988	56,459
35851 72	Combination ice makers and ice dispensers AND	6				
35851 73	Combination ice makers and drink dispensers	5	10,072	24,525	8,346	22,923
35851 74	Absorption refrigeration and dehydration systems AND	6				
35851 78	Mechanical refrigeration systems used on all types of vehicles	9	66,548	553,783	51,285	389,994
	Mobile vehicle mechanical air-conditioning systems	(X)	9,808,815	1,378,328	11,761,566	1,349,747
35851 79	Air-conditioning units and systems for passenger automobiles ³	13	6,456,361	906,263	7,720,706	929,314
35851 80	Air-conditioning units and systems for trucks, buses, construction and agriculture machinery and other vehicles	16	3,352,454	472,065	3,040,860	420,433
	Reciprocating liquid-chilling packages	(X)	16,035	291,649	15,395	266,557
35851 87	20 hp and under	20	5,543	30,899	5,425	30,723
35851 88	21 to 49 hp	14	2,087	25,098	2,528	33,806
35851 89	50 to 75 hp	12	2,073	34,886	2,093	36,224
35851 90	Over 75 hp	11	6,332	200,766	5,349	165,804
35851 92	Factory-fabricated water cooling towers	10	9,297	106,556	8,549	100,181
35852 —	Unitary air-conditioners	55	(X)	3,684,711	(X)	3,532,970
35852 10	Recreational vehicle air-conditioners	8	258,039	99,834	231,395	85,250
	Single package air-conditioners, with or without evaporator fans, including refrigeration chassis and remote-condenser type	(X)	179,270	361,228	176,650	336,067
	Horizontal	(X)	154,078	301,066	151,698	268,876
35852 31	Under 27,000 Btuh	20	12,184	10,364	21,212	14,268
35852 32	27,000 to 32,999 Btuh	19	21,306	18,032	21,840	17,141
35852 33	33,000 to 53,999 Btuh	21	56,604	47,302	53,146	44,293
35852 34	54,000 to 64,999 Btuh	19	22,589	27,972	22,702	28,138
35852 35	65,000 to 96,999 Btuh	13	11,895	24,483	9,945	20,777
35852 36	97,000 to 134,999 Btuh	12	12,470	35,993	9,546	27,601
35852 37	135,000 to 184,999 Btuh	11	8,397	37,269	6,066	26,284
35852 38	185,000 to 249,999 Btuh	11	4,975	31,977	3,919	25,686
35852 39	250,000 to 319,999 Btuh	11	1,595	16,045	1,206	12,770
35852 40	320,000 to 379,999 Btuh	8	472	6,917	510	6,967
35852 41	380,000 Btuh and over	9	1,591	44,712	1,606	44,951
	Other than horizontal	(X)	25,192	60,162	24,952	67,191
35852 42	Under 33,000 Btuh AND	4				
35852 43	33,000 to 53,999 Btuh	7	16,265	20,238	14,719	18,192
35852 44	54,000 to 64,999 Btuh	7	4,135	8,527	3,785	8,295
35852 45	65,000 to 96,999 Btuh	6	1,141	3,585	1,432	4,322
35852 46	97,000 to 134,999 Btuh	5	1,157	4,454	1,609	5,994
35852 47	135,000 to 184,999 Btuh	6	1,127	5,568	1,659	8,195
35852 48	185,000 to 249,999 Btuh AND	4				
35852 49	250,000 Btuh and over	5	1,367	17,790	1,748	22,193
	Year-round air-conditioners, single package and remote condenser type (except heat pumps) ..	(X)	411,468	793,173	389,566	757,013
35852 50	Under 33,000 Btuh	19	109,760	101,872	105,115	97,731
35852 51	33,000 to 38,999 Btuh	20	86,929	83,365	89,076	89,904
35852 52	39,000 to 43,999 Btuh	14	26,196	35,745	22,549	24,030
35852 53	44,000 to 53,999 Btuh	18	40,466	49,109	39,854	50,783
35852 54	54,000 to 64,999 Btuh	19	59,599	87,215	54,357	82,832
35852 55	65,000 to 134,999 Btuh	15	58,637	170,940	53,290	157,769

See footnotes at end of table.

Table 7. QUANTITY AND VALUE OF SHIPMENTS OF REFRIGERATION, AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35852 —	Unitary air-conditioners—Cont. Year-round air-conditioners, single package and remote condenser type (except heat pumps)—Cont.					
35852 56	135,000 to 184,999 Btuh	14	17,170	88,067	13,625	70,859
35852 57	185,000 to 249,999 Btuh	14	7,388	58,337	6,604	50,897
35852 58	250,000 to 319,999 Btuh	11	2,238	26,106	1,854	23,709
35852 59	320,000 to 379,999 Btuh	10	948	13,842	1,139	17,332
35852 60	380,000 to 539,999 Btuh	10	998	20,370	932	20,452
35852 61	540,000 to 639,999 Btuh	9	343	12,858	264	11,087
35852 62	640,000 Btuh and over	11	796	45,347	907	59,628
	Air source heat pumps (except room air-conditioners)	(X)	794,992	614,181	825,160	626,306
	Single package:					
35852 63	Under 27,000 Btuh	14	22,379	19,463	'34,341	'26,215
35852 64	27,000 to 41,999 Btuh	15	55,121	53,538	'58,056	'57,057
35852 65	42,000 to 64,999 Btuh	14	33,446	41,007	'39,670	49,988
35852 66	65,000 Btuh and over	8	7,170	36,920	6,736	27,017
	Split system:					
35852 67	Under 27,000 Btuh	13	204,941	96,061	'211,611	'102,970
35852 68	27,000 to 41,999 Btuh	14	309,587	217,106	'321,895	'215,130
35852 69	42,000 to 64,999 Btuh	14	151,664	128,387	'146,664	'131,384
35852 70	65,000 Btuh and over	6	10,684	21,699	6,187	16,545
35852 71	Water source heat pumps (except room air-conditioners)	12	99,236	101,621	'111,745	'102,424
	Split system air-conditioning condensing units ..	(X)	2,440,397	1,269,784	2,455,692	1,217,019
35852 72	Under 22,000 Btuh	14	174,584	57,151	'227,666	'73,386
35852 73	22,000 to 26,999 Btuh	17	517,946	188,953	'518,893	171,845
35852 74	27,000 to 32,999 Btuh	16	542,118	231,137	'495,228	198,266
35852 75	33,000 to 38,999 Btuh	17	535,039	255,058	'570,456	263,080
35852 76	39,000 to 43,999 Btuh	16	209,533	116,617	'172,771	'100,117
35852 77	44,000 to 53,999 Btuh	19	219,225	142,639	'233,520	'142,458
35852 78	54,000 to 64,999 Btuh	16	195,848	145,777	'191,599	'139,641
35852 79	65,000 to 96,999 Btuh	10	16,580	24,657	'17,373	'25,279
35852 80	97,000 to 134,999 Btuh	9	12,580	24,488	'12,443	'24,253
35852 81	135,000 to 184,999 Btuh	8	8,167	23,948	7,311	21,376
35852 82	185,000 to 249,999 Btuh	6	3,541	14,488	3,535	14,395
35852 83	250,000 to 319,999 Btuh	5	1,451	7,967	1,344	7,430
35852 84	320,000 to 379,999 Btuh	5	1,384	8,897	1,172	7,538
35852 85	380,000 to 539,999 Btuh	4	1,101	9,305	1,096	9,432
35852 86	540,000 to 639,999 Btuh AND	4				
35852 87	640,000 Btuh and over	3	1,300	18,702	1,285	18,523
	Split system air-conditioning coils	(X)	2,240,560	444,890	2,014,368	408,891
35852 88	With blower	18	931,200	278,119	'919,587	'255,099
35852 89	Without blower	13	1,309,360	166,771	'1,094,781	'153,792
35853 43	Commercial refrigeration equipment, mechanical drinking water coolers	5	677,508	161,610	690,797	147,875
35854 —	Compressors and compressor units ^{4 5}	36	(X)	2,646,058	(X)	2,317,053
	All refrigerants except ammonia	(X)	25,614,602	2,589,904	21,593,974	2,264,672
	Hermetic-type motor compressors	(X)	16,803,016	1,759,233	13,694,304	1,510,455
35854 11	Under 3 hp	13	12,966,032	911,600	10,680,932	813,886
35854 23	3 to 10 hp	14	3,756,812	688,799	2,918,869	539,115
35854 30	15 hp	10	20,263	24,308	28,603	25,362
35854 32	20 hp	10	17,467	24,669	20,077	22,608
35854 34	25 hp	11	12,718	20,257	15,775	22,501
35854 36	30 hp	11	7,714	16,266	8,749	14,547
35854 38	40 hp AND	10				
35854 40	50 hp	8	15,388	39,126	14,363	36,550
35854 42	60 hp	8	2,689	8,931	'2,657	'8,887
35854 46	75 hp	7	1,855	7,838	1,970	8,090
35854 48	100 hp AND	6				
35854 50	Over 100 hp	5	2,078	17,439	'2,309	'18,909
35854 52	Open-type compressors (with or without motor—all sizes)	11	73,514	39,075	86,591	48,362
35854 53	Automotive air-conditioning compressors (open-type, with or without motor) AND	7				
35854 54	Screw type	1	8,738,072	791,596	7,813,079	705,855

See footnotes at end of table.

Table 7. QUANTITY AND VALUE OF SHIPMENTS OF REFRIGERATION, AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35854 —	Compressors and compressor units—Cont.					
	Ammonia refrigerants	(X)	1,788	56,154	1,672	52,381
35854 56	Under 75 hp AND	3				
35854 57	75 to 99 hp AND	4				
35854 59	100 hp and over	7	1,788	56,154	1,672	52,381
35855—	Condensing units, refrigeration (complete)	27	445,906	207,165	399,959	210,372
	Air-cooled hermetic-type	(X)	432,389	153,085	383,931	157,060
35855 21	Under 1 hp AND	13				
35855 22	1 hp	12	357,412	67,261	308,521	59,796
35855 25	1.5 hp	11	19,073	11,462	20,642	11,916
35855 27	2 hp AND	15				
35855 29	2.5 hp	3	15,921	13,241	13,985	12,592
35855 30	3 hp	12	21,305	20,046	20,211	21,235
35855 32	Over 3 hp but under 15 hp	14	18,678	41,075	20,572	51,521
	Water-cooled hermetic-type	(X)	8,036	6,029	9,217	5,775
35855 45	1.5 hp and under AND	5				
35855 46	2 hp AND	4				
35855 47	3 hp AND	5				
35855 48	4 hp AND	-				
35855 49	5 hp AND	4				
35855 50	7.5 hp AND	4				
35855 51	10 hp	3	8,036	6,029	9,217	5,775
	Water or air-cooled hermetic-type	(X)	4,330	44,471	5,647	44,857
35855 61	15 hp	6	1,942	20,002	2,607	18,835
35855 62	20 hp	6	951	6,234	1,206	7,085
35855 63	25 hp	5	534	3,764	1,839	5,339
35855 64	30 hp AND	5				
35855 70	40 hp	5	903	14,471	995	13,598
35855 80	Water or air-cooled open-type (all sizes)	6	1,151	3,580	1,164	2,680
35856 —	Room air-conditioners and dehumidifiers	19	(X)	817,298	(X)	811,751
	Electrically operated dehumidifiers, mechanically refrigerated, self-contained	13	(X)	88,563	(X)	104,594
35856 31	Room air-conditioners	(X)	2,519,030	728,735	2,285,577	707,157
	5,999 Btuh and under	7	575,542	114,401	591,872	111,203
	6,000 to 6,999 Btuh:					
35856 33	115 volts AND	7				
35856 35	All other	3	223,721	51,191	142,985	38,847
	7,000 to 7,999 Btuh:					
35856 37	115 volts AND	6				
35856 39	All other	1	153,114	34,006	190,326	46,337
	8,000 to 8,999 Btuh:					
35856 41	115 volts AND	5				
35856 43	208 to 230 volts	4	293,300	72,000	113,334	32,062
	9,000 to 9,999 Btuh:					
35856 45	115 volts	6	46,228	12,732	79,557	23,571
35856 47	208 to 230 volts	6	18,804	5,578	18,165	6,485
	10,000 to 10,999 Btuh:					
35856 51	115 volts AND	6				
35856 53	208 to 230 volts	3	306,452	87,561	259,112	77,430
	11,000 to 12,999 Btuh:					
35856 55	115 volts	6	243,121	76,622	187,208	61,666
35856 57	208 to 230 volts	7	94,543	32,097	89,708	31,661
35856 61	13,000 to 14,999 Btuh	6	89,902	32,276	95,511	37,206
35856 63	15,000 to 16,999 Btuh	6	23,508	11,160	23,888	11,555
35856 65	17,000 to 19,999 Btuh	7	296,126	110,273	299,304	118,296
35856 67	20,000 to 22,999 Btuh	6	37,311	15,705	56,807	26,756
35856 68	23,000 to 25,999 Btuh	7	93,571	46,129	110,254	53,148
35856 69	26,000 Btuh and over	8	23,787	27,004	27,546	30,934
3585C pt	Nonelectric warm air furnaces and dehumidifiers ..	(X)	(X)	1,191,579	(X)	957,333
	Nonelectric warm air furnaces	56	2,417,409	1,142,913	2,019,385	909,178
	Forced air:					
3585C 03	Solid fuel (coal, coke, and wood)	9	903	1,249	(D)	(D)

See footnotes at end of table.

Table 7. QUANTITY AND VALUE OF SHIPMENTS OF REFRIGERATION, AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3585C pt	Nonelectric warm air furnaces and dehumidifiers—Cont. Nonelectric warm air furnaces—Cont. Forced air: Oil:					
3585C 04	150,000 Btu bonnet output and under ...	19	128,913	75,623	'102,664	'60,626
3585C 05	150,001 to 400,000 Btu bonnet output...	17	5,831	6,454	'3,704	'5,049
3585C 06	Over 400,000 Btu bonnet output	8	189	1,476	132	786
	Gas:					
3585C 07	150,000 Btu bonnet output and under ...	22	2,276,432	1,027,946	'1,899,626	'810,821
3585C 08	150,001 to 400,000 Btu bonnet output...	13	3,965	11,222	12,128	13,046
3585C 09	Over 400,000 Btu bonnet output	8	1,176	18,943	1,131	18,850
3585C 15	Gravity air flow (cast-iron and steel)	-	-	-	(D)	(D)
3585C 20	Humidifiers (attachments to warm air furnaces) all types, including central systems and self-contained (except portable humidifiers)	20	439,873	48,666	457,420	48,155

- Represents zero. Btuh (British thermal units per hour). (D) Data withheld to avoid disclosing figures for individual companies. pt. Partial.
 'Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹Defined as factory selected combinations of heating and cooling components or assemblies intended to serve an individual room and comprising: (1) heating assembly available with element for use with hot water, steam, and electricity; means for forced heated air circulation and distribution; integral or remote temperature controls; (2) slide-in cooling section with complete refrigerant cycle; (3) room cabinet; (4) provision for outdoor air intake and discharge and accessories as required for mounting in a building wall; (5) provisions for air filtration and ventilation; (6) permanent individual branch circuit wiring with a suitable line cord or terminating at a junction box within the room cabinet; and (7) provision for free conditioned air distribution, or, when forced circulation is employed, for minimal duct work having a total external static resistance not exceeding 1/10 inch of water.

²Product code 35851 41 combined with product code 35851 44 to avoid disclosing figures for individual companies.

³Figures exclude systems assembled from purchased components and installed at passenger automobile assembly lines. The values are understated for some systems because of the exclusion of compressors.

⁴Represents only those compressors and compressor units produced and shipped separately, including interplant transfers.

⁵Includes units shipped for household refrigerators.

Table 8. QUANTITY OF ASSEMBLED COMPRESSOR BODIES: 1992 AND 1991

[Quantity in number of units]

Product description	Number of companies	1992	1991
Compressor bodies ^{1 2}	(X)	25,746,542	22,079,148
All refrigerants (except ammonia)	(X)	25,745,301	22,077,888
Other than automotive air-conditioning	(X)	17,257,735	14,546,622
1/5 hp and under AND	5		
1/4 hp.	6	5,022,093	'3,870,960
1/3 hp AND	4		
1/2 hp.	6	1,811,736	'1,477,232
3/4 hp.	5	700,865	491,250
1 hp.	6	966,605	968,062
1-1/2 hp.	6	608,136	530,727
2 hp.	8	3,293,524	2,678,178
3 hp.	12	2,502,898	2,540,892
4 hp.	5	645,442	611,752
5 hp.	8	1,030,883	791,283
7-1/2 hp.	11	311,804	266,598
10 hp.	12	203,973	151,378
15 hp.	11	59,603	67,899
20 hp.	9	27,353	33,604
25 hp.	11	17,709	15,936
30 hp.	11	19,620	21,716
40 hp.	11	22,172	16,125
50 hp.	9	3,163	3,506
60 hp.	9	3,514	3,242
75 hp.	8	2,116	2,478
100 hp and over	8	4,526	3,804
Automotive air-conditioning, including passenger automobiles, trucks, buses, and agriculture and construction equipment	5	8,487,566	7,531,266
Ammonia refrigerants	7	1,241	1,260

¹Revised by 5 percent or more from previously published figures. (X) Not applicable.

²Includes units for household refrigerators.

²Represents the total number of compressor bodies assembled, whether shipped separately or incorporated into a condensing package or unitary end-use product, such as single package air-conditioners, freezers, and refrigerators (manufactured and remanufactured units).

Table 9. **SHIPMENTS, EXPORT, IMPORTS, AND APPARENT CONSUMPTION OF AIR-CONDITIONING AND REFRIGERATION EQUIPMENT: 1992 AND 1991**

[Value in thousands of dollars]

Product code ¹	Product description	Manufacturers' shipments (value f.o.b. plant)	Export of domestic merchandise ¹		Imports for consumption ^{4, 5}
			Value at port ²	Estimated producers ¹ value ³	
1992					
35851	Heat transfer equipment, excluding room and unitary air-conditioners and dehumidifiers.	4,237,174	651,107	488,460	142,476
35852	Unitary air-conditioners	3,684,711	653,947	490,591	170,645
35853 43	Commercial refrigeration equipment, mechanical drinking water coolers.....	161,610	26,306	19,735	360
35854	Compressors and compressor units, all refrigerants.....	2,646,058	552,812	414,720	656,099
35855	Condensing units, all refrigerants	207,165	12,397	9,300	11,722
35856	Room air-conditioners and dehumidifiers.....	817,298	98,946	74,229	148,418
3585C pt.	Nonelectric warm air furnaces and humidifiers.....	1,190,330	(NA)	(NA)	(NA)
1991					
35851	Heat transfer equipment, excluding room and unitary air-conditioners and dehumidifiers.	3,925,409	537,429	437,575	87,317
35852	Unitary air-conditioners	3,532,970	572,136	465,833	136,127
35853 43	Commercial refrigeration equipment, mechanical drinking water coolers.....	147,875	33,044	26,904	365
35854	Compressors and compressor units, all refrigerants.....	2,317,053	427,467	348,044	755,393
35855	Condensing units, all refrigerants	210,372	12,658	10,306	12,007
35856	Room air-conditioners and dehumidifiers.....	811,751	84,480	68,783	156,745
3585C pt.	Nonelectric warm air furnaces and humidifiers.....	957,333	(NA)	(NA)	(NA)

(NA) Not available. pt. partial.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*. (See appendix B for a comparison of SIC-based codes and import and export numbers.)²This dollar value represents the c.i.f. (cost, insurance, and freight) value at the port of export.³These values were derived by use of adjustment factors to exclude freight, insurance, and other charges incurred in moving goods to the port of export. This adjustment is made to convert the values to an approximation of the producers' value of exported goods. Current adjustment factors are based on data for 1989 which are published in *Exports from Manufacturing Establishments*, AR89-1, appendix B. The adjustment factor for this report is 0.7502.⁴Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*. These figures include both import value and duty value.⁵This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry into the United States, plus U.S. import duties.**HISTORICAL NOTE**

Data on air conditioning and refrigeration have been collected by the Bureau of the Census since 1944. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Joanna Nguyen, 301-763-7872 or Milbren Thomas, 301-763-2528.

9.4 FLUID POWER PRODUCTS, INCLUDING AEROSPACE

INTRODUCTION

These data cover producers of fluid power products, including aerospace, except very small firms (generally less than 20 employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies.

The statistics were collected by mail on Bureau of the Census annual Form MA35N, Fluid Power Products, Including Aerospace Products. The survey panel includes all known producers of fluid power products, approximately 479 companies. This survey does not include products produced and consumed within the same establishment.

SUMMARY OF FINDINGS

Shipments of fluid power products, including aerospace, in 1992 totaled \$6,249.3 million, a decrease of 4 percent from the 1991 total of \$6,477.1 million. The 1992 total includes hydraulic and pneumatic valves, including aerospace, \$1,527.8 million, a decrease of 3 percent from the 1991 total of \$1,567.1 million; fittings and assemblies for tubing and hose, excluding plumber's brass goods, \$1,372.5 million, a decrease of 3 percent from the 1991 total of \$1,409.0 million; hydraulic and pneumatic cylinders, actuator accumulators, cushions, and nonvehicular shock absorbers, \$1,512.5 million, a decrease of 4 percent from the 1991 total of \$1,578.8 million; filters of hydraulic and pneumatic fluid power systems, \$383.9 million, an increase of 6 percent from the 1991 total of \$410.2 million; hydraulic fluid power pumps, motors, and hydrostatic transmission components, \$1,355.2 million, an increase of less than 1 percent from the 1991 total of \$1,350.8 million.

EXPLANATION OF TERMS

Hydraulic Valves. Devices used to regulate or control the direction, pressure, or volume of hydraulic fluid flowing through an hydraulic fluid power system.

Pneumatic (Air) Valves. Devices used to regulate or control the direction, pressure, or volume of air flowing through a pneumatic fluid power system.

Pneumatic (Air) Motors, Continuous Rotation. Devices that convert pneumatic (air) fluid power (pressure) into rotary mechanical force and motion, with the capability of continuous unimpeded rotation in a single direction.

Hydraulic Fluid Power Pumps. Devices that convert mechanical force and motion into hydraulic fluid power.

Hydrostatic Transmissions. A combination of hydraulic pumps, motors, controls, and related components that can transmit rotary motion with variably controlled direction, speed, and torque output. Integral transmissions contain all components within a single assembly.

Hydraulic and Pneumatic Cylinders. Devices that convert hydraulic or pneumatic fluid power into linear mechanical force and motion.

Hydraulic and Pneumatic Rotary Actuators. Devices that convert hydraulic or pneumatic fluid power into rotary mechanical force and motion where the rotary motion is limited to a fixed arc.

Accumulators (Hydraulic Only). Devices that store hydraulic fluid under pressure as a source of fluid power.

Cushions and Shock Absorbers (Hydraulic and Pneumatic). Devices that provide controlled resistance or deceleration to motion. Cushions resist nonlinear motion. Shock absorbers resist linear motion.

Hose or Tube Fittings. Devices used to connect hose or tubing to other components in a fluid power system.

Hose or Tube Assemblies. Performed and/or cut-to-length hose or tube with fittings attached at both ends, that is used to connect components in a fluid power system.

Table 10. VALUE OF SHIPMENTS OF FLUID POWER PRODUCTS, INCLUDING AEROSPACE: 1984 TO 1992

[Value in thousands of dollars]

Product code	Product description ¹	1992	1991	1990	1989	1988	1987	1986	1985	1984
	Fluid power products, including aerospace.....	6,249,324	6,477,139	7,207,248	6,914,781	6,784,522	6,165,700	5,109,816	4,916,192	4,717,597
34921	Hydraulic valves, nonaerospace types	625,558	605,757	663,093	628,762	615,379	553,611	487,624	498,766	493,942
34922	Pneumatic valves, nonaerospace types	463,018	434,234	458,252	462,899	444,813	391,570	382,508	405,589	468,988
34923	Aerospace type hydraulic and pneumatic valves	439,270	527,094	498,251	450,815	400,054	387,336	302,727	255,468	228,861
34924	Fittings for metal and plastic tubing used in fluid and power transfer systems (nonaerospace)	454,744	471,186	499,944	504,717	459,658	398,331	372,791	384,168	389,462
34925	Hydraulic and pneumatic fittings and couplings for hose (nonaerospace) ..	574,713	551,598	620,162	625,012	649,286	605,429	458,989	439,841	425,958
34926	Hydraulic and pneumatic hose or tube end fitting and assemblies (aerospace)	343,085	386,233	393,672	335,537	326,844	249,711	175,709	154,774	155,889
34927	Parts for hydraulic and pneumatic valves	97,387	161,319	208,545	205,772	218,947	183,338	145,016	123,661	123,241
35692	Filters for hydraulic and pneumatic fluid power systems	383,868	410,167	385,408	352,187	310,347	284,425	297,155	281,533	254,876
35931	Hydraulic and pneumatic cylinders and related items, (nonaerospace) ..	930,951	865,079	940,713	908,624	906,554	793,583	665,949	625,397	610,337
35932	Hydraulic and pneumatic cylinders and related items, (aerospace)	412,409	509,772	636,340	646,414	635,801	637,327	535,873	479,988	329,557
35933	Parts for hydraulic and pneumatic cylinders, actuators, accumulators, cushions, and nonvehicular shock absorbers	169,095	203,935	264,192	280,510	290,853	288,635	164,174	154,941	152,615
35941	Hydraulic fluid power pumps and motors ²	999,042	997,184	1,240,086	1,180,435	1,177,545	1,052,045	924,564	905,536	893,266
35942	Parts for pumps and motors	356,184	353,581	398,590	333,097	348,441	340,359	196,737	206,530	190,605

¹Revised by 5 percent or more from previously published figures.¹Product descriptions are based on pre-1992 basis.²Includes pneumatic motors.

Table 11. VALUE OF SHIPMENTS OF FLUID POWER PRODUCTS, INCLUDING AEROSPACE: 1992 AND 1991

[Value in thousands of dollars]

Product code	Product description ¹	1992	1991
	Fluid power products, including aerospace	6,249,324	6,477,139
3492C	Nonaerospace-type hydraulic directional control valves	328,074	313,678
3492D	Nonaerospace-type hydraulic valves (except directional control)	297,484	292,079
3492E	Nonaerospace-type pneumatic directional control valves	314,382	294,113
3492F	Nonaerospace-type pneumatic valves (except directional control valves)	148,636	140,121
3492G	Parts for fluid power valves	97,387	161,319
3492A	Aerospace-type hydraulic fluid power valves	317,297	352,986
3492B	Aerospace-type pneumatic fluid power valves	121,973	174,108
3492J	Nonaerospace-type flared (metal) fittings, couplings for, and assemblies of tubing used in fluid power transfer systems	144,517	148,556
3492K	Nonaerospace-type flareless fittings and couplings, including nonmetal fittings used in fluid power transfer systems	310,227	322,630
3492M	Nonaerospace-type hydraulic and pneumatic fittings and couplings for hose	419,782	412,780
3492N	Nonaerospace-type hydraulic and pneumatic assemblies of hose	154,931	138,818
3492H	Aerospace-type hydraulic and pneumatic hose or tube end fittings and assemblies	343,085	386,233
35694	Filters for hydraulic fluid power systems, nonaerospace	219,153	220,811
35695	Filters for pneumatic fluid power systems, nonaerospace	95,834	96,338
35696	Filters for hydraulic and pneumatic fluid power systems, aerospace	68,881	93,018
35934	Nonaerospace-type hydraulic fluid power cylinders and actuators, linear and rotary	550,950	516,639
35935	Nonaerospace-type pneumatic fluid power cylinders and actuators, linear and rotary	315,627	283,669
35939	Parts for hydraulic and pneumatic fluid power cylinders and actuators	233,469	268,706
35932	Aerospace-type fluid power cylinders and actuators hydraulic and pneumatic	412,409	509,772
35943	Nonaerospace-type reciprocating pumps	277,131	279,842
35944	Nonaerospace-type rotary and other fluid power pumps	343,008	317,352
35945	Nonaerospace-type fluid power motors	206,955	194,347
35946	Aerospace-type fluid power pumps and motors	171,948	205,643
35949	Parts for fluid power pumps, motors, and hydrostatic transmissions	356,184	353,581

¹Product descriptions are based on 1992 basis.

**Table 12. MANUFACTURER'S SHIPMENTS OF FLUID POWER PRODUCTS, INCLUDING AEROSPACE:
BY TYPE: 1992 AND 1991**

[Quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
	Fluid power products.....	(X)	(X)	6,249,324	(X)	6,477,139
3492 —	Fluid power valves and hose fittings	(X)	(X)	2,997,775	(X)	3,137,421
3492C —	Nonaerospace-type hydraulic directional control valves	(X)	6,144,010	328,074	5,248,373	313,678
3492C 21	Manual	53	2,277,694	170,727	1,914,725	158,738
3492C 23	Solenoid	52	2,923,359	119,276	2,538,353	116,261
3492C 25	Other, including mechanical and pilot operated.....	32	942,957	38,071	795,295	38,679
3492D —	Nonaerospace-type hydraulic valves (except directional control).....	(X)	5,668,980	297,484	5,291,433	292,079
3492D 33	Pressure control.....	42	2,001,371	92,605	1,785,971	101,668
3492D 35	Volume flow control.....	45	2,263,734	71,283	2,237,885	62,843
3492D 41	Combination	13	356,716	33,783	363,896	32,895
3492D 48	Other, including logic.....	28	924,476	52,274	791,384	52,076
	Electrohydraulic types:					
3492D 49	Servo valves AND	17				
3492D 50	Other	4	122,683	47,539	112,297	42,597
3492E —	Nonaerospace-type pneumatic directional control valves	(X)	11,228,344	314,382	10,039,575	294,113
3492E 51	Manual	42	1,959,558	41,962	1,803,311	38,008
3492E 53	Solenoid	43	6,738,996	229,868	6,265,272	220,947
3492E 55	Other, including mechanical.....	31	2,529,790	42,552	1,970,992	35,158
3492F —	Nonaerospace-type pneumatic valves (except directional control).....	(X)	12,959,392	148,636	11,961,975	140,121
3492F 61	Filter-regulator combination units	13	266,866	9,583	260,937	8,313
3492F 62	Filter-regulator-lubricator combination units	13	2,888,467	33,559	2,684,623	31,112
3492F 64	Other pressure control	16	4,528,608	64,635	4,086,189	61,952
3492F 65	Volume flow control.....	33	2,655,387	25,805	2,444,800	23,381
3492F 69	Other, including logic and combination	19	2,620,064	15,054	2,485,426	15,363
3492G 96	Parts for nonaerospace hydraulic and pneumatic valves, sold separately	34	(X)	87,958	(X)	97,697
3492A —	Aerospace type hydraulic fluid power valves	(X)	920,377	317,297	1,028,005	352,986
	Two-, three-, and four-way directional control valves:					
3492A 71	Manually or mechanically operated	18	118,791	31,251	136,885	36,028
3492A 72	Solenoid operated	23	75,345	48,682	97,730	56,047
3492A 73	Motor operated.....	8	26,850	29,012	27,860	31,586
3492A 74	Electrohydraulic servo valves	8	95,939	91,174	103,412	103,315
3492A 75	Flow pressure, and other types of hydraulic control valves, n.e.c., including relief valves, fuses, pressure regulators, flow regulators, check valves and similar valves.....	29	603,452	117,178	662,118	126,010
3492B —	Aerospace-type pneumatic fluid power valves.....	(X)	393,025	121,973	476,215	174,108
3492B 79	Pneumatic valves, all types	27	393,025	121,973	476,215	174,108
3492G 98	Parts for aerospace-type fluid power (hydraulic and pneumatic valves, sold separately)	28	(X)	56,729	(X)	63,622
3492J —	Nonaerospace-type flared (metal) fittings, couplings for, and assemblies of tubing used in fluid power transfer systems..	(X)	(X)	144,517	(X)	148,556
3492J 11	Brass and bronze (SAE 45 degrees and 37 degrees)	12	(X)	5,490	(X)	16,209
3492J 13	Carbon steel (JIC 37 degrees)	20	(X)	63,195	(X)	56,864
3492J 15	Other, including alloy steel.....	16	(X)	44,711	(X)	49,378
3492J 41	Assemblies of tubing.....	11	(X)	16,977	(X)	12,227
3492J 42	Assemblies of tubing and hose.....	6	(X)	14,144	(X)	13,878
3492K —	Nonaerospace-type flareless fittings and couplings, including nonmetal fittings used in fluid power transfer systems	(X)	(X)	310,227	(X)	322,630
3492K 21	Brass and bronze.....	23	(X)	102,823	(X)	111,263
3492K 23	Carbon steel	19	(X)	37,174	(X)	40,779
3492K 24	Stainless steel	23	(X)	152,577	(X)	153,739
3492K 28	Other, including alloy steel.....	15	(X)	7,171	(X)	7,192
3492K 38	Nonmetal fittings, including plastic.....	9	(X)	10,482	(X)	9,657
3492M —	Nonaerospace-type hydraulic and pneumatic fittings and couplings for hose	(X)	(X)	419,782	(X)	412,780
3492M 44	Hydraulic and pneumatic permanent hose end fittings (crimped and swaged).....	28	(X)	153,871	(X)	151,422
3492M 46	Hydraulic and pneumatic reusable end fittings	23	(X)	79,250	(X)	88,688
3492M 47	Hydraulic quick connect and disconnect couplings	24	(X)	80,848	(X)	74,780
3492M 48	Pneumatic quick connect and disconnect couplings	21	(X)	63,949	(X)	56,029
3492M 49	Manifolds and manifold assemblies, including valve sub plates	21	(X)	14,807	(X)	12,346

See footnotes at end of table.

Table 12. **MANUFACTURER'S SHIPMENTS OF FLUID POWER PRODUCTS, INCLUDING AEROSPACE:
BY TYPE: 1992 AND 1991—Continued**

[Quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
	Fluid power products—Cont.					
3492 —	Fluid power valves and hose fittings—Cont.					
3492M —	Nonaerospace-type hydraulic and pneumatic fittings and couplings for hose—Cont.					
3492M 50	All other, including steel adaptor connectors, swivel, rotating, and extension fittings	19	(X)	27,057	(X)	28,715
3492N —	Nonaerospace-type hydraulic and pneumatic assemblies of hose	(X)	(X)	154,931	(X)	138,818
3492N 51	Permanent end fitting types	21	(X)	132,553	(X)	118,841
3492N 53	Reusable end fitting types	6	(X)	22,378	(X)	19,977
3492H —	Aerospace-type hydraulic and pneumatic hose or tube end fittings and assemblies	(X)	(X)	343,085	(X)	386,233
3492H 61	Assemblies of hose and/or tubing	8	(X)	92,112	(X)	103,844
3492H 62	Quick connect fittings, rotating, swivel, and extension fittings	8	(X)	25,411	(X)	27,259
3492H 63	Manifolds and manifold assemblies, including manifolds with filters, valves, and similar items installed	10	(X)	41,153	(X)	40,592
3492H 69	Fittings for hose and tubing, n.e.c.	22	(X)	184,409	(X)	214,538
35694 —	Filters for hydraulic fluid power systems, nonaerospace	(X)	(X)	219,153	(X)	220,811
	Hydraulic fluid filter assemblies, with or without filter elements installed:					
35694 11	Low pressure (below 300 psi)	31	791,417	38,063	724,827	33,222
35694 12	High pressure, 301 to 2,999 psi	12	165,046	10,218	151,736	11,158
35694 14	High pressure (3,000 psi and above)	9	40,533	7,430	137,302	12,983
	Filter replacement elements:					
35694 15	Reusable (cleanable) type	20	396,241	8,644	402,560	9,198
35694 17	Nonreusable type	29	13,024,560	121,823	11,759,183	116,029
35694 19	Strainers and separators, other contaminant removal devices and filter parts and accessories	31	(X)	32,975	(X)	38,221
35695 —	Filters for pneumatic fluid power systems, nonaerospace	(X)	(X)	95,834	(X)	96,338
35695 31	Air supply filter assemblies and filter replacement element, including coalescers; excluding those shipped as part of a filter-regulator or filter regulator-lubricator combination unit, including parts	23	(X)	82,890	(X)	83,232
35695 39	Air exhaust mufflers, diffusers, filter parts, accessories, and contaminant removal devices	17	(X)	12,944	(X)	13,106
35696 —	Filters for hydraulic and pneumatic fluid power systems, aerospace	(X)	(X)	68,881	(X)	93,018
35696 51	Hydraulic	9	(X)	68,881	(X)	93,018
35696 53	Pneumatic	-	-	-	-	-
35934 —	Nonaerospace-type hydraulic fluid power cylinders and actuators, linear and rotary	(X)	2,490,948	550,950	2,324,792	516,639
	Hydraulic cylinders, excluding electrohydraulic:					
	Tie-rod types:					
35934 09	Standard NFPA and JIC tie-rod types	33	339,389	103,923	321,742	96,441
35934 10	Other tie-rod types, including ASAE	14	410,917	35,272	396,740	35,045
35934 12	Weld fused	42	921,747	126,136	874,251	125,132
35934 13	Telescoping	26	72,123	54,532	54,851	49,068
35934 14	Threaded	35	579,783	146,054	600,196	143,279
35934 15	Mill type	17	103,995	35,742	19,536	23,653
35934 16	Other, including combinations	19	(¹)	(¹)	18,584	14,175
35934 18	Electrohydraulic types ¹	2	31,659	24,309	(NA)	(NA)
35934 25	Hydraulic rotary actuators	17	31,335	24,982	38,892	29,846
35935 —	Nonaerospace-type pneumatic fluid power cylinders and actuators, linear and rotary	(X)	16,617,974	315,627	13,145,276	283,669
35935 21	Tie-rod types	40	722,242	115,419	817,714	112,686
35935 22	Other	54	15,797,040	176,929	12,233,703	149,348
35935 26	Pneumatic rotary actuators	18	98,699	23,279	93,859	21,635
35939 —	Parts for hydraulic and pneumatic fluid power cylinders and actuators	(X)	(X)	233,469	(X)	268,706
35939 31	Accumulators (fluid power), including hydraulic, hydropneumatic, and pneumatic	23	79,229	28,622	78,589	30,453
35939 33	Cushions (fluid power), nonlinear, including hydraulic, hydropneumatic, and pneumatic AND	1				
35939 37	Shock absorbers, not for vehicle suspension, hydraulic and pneumatic	14	774,628	35,752	873,614	34,318

See footnotes at end of table.

Table 12. **MANUFACTURER'S SHIPMENTS OF FLUID POWER PRODUCTS, INCLUDING AEROSPACE:
BY TYPE: 1992 AND 1991—Continued**

[Quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35939 96	Fluid power products—Cont. Parts for nonaerospace hydraulic and pneumatic cylinders actuators, accumulators, cushions, and nonvehicular shock absorbers, sold separately.....	55	(X)	111,585	(X)	'148,267
35939 98	Parts for aerospace type fluid power (hydraulic and pneumatic), cylinders, actuators, accumulators, cushions, and related items sold separately.....	18	(X)	57,510	(X)	'55,668
35932 —	Aerospace-type fluid power cylinders and actuators, hydraulic and pneumatic.....	(X)	(X)	412,409	(X)	509,772
35932 51	Hydraulic servo-actuator assemblies (linear and rotary): Mechanical input	5	22,430	86,609	'36,104	'140,474
35932 52	Electrical input	7	11,016	89,675	'17,305	103,835
35932 55	Combination input	6	10,188	121,776	'18,314	'133,068
35932 61	Hydraulic utility actuators: Linear actuators (cylinders) AND	12				
35932 62	Rotary actuators (limited rotation)	2	12,286	35,216	17,846	39,550
35932 71	Shock absorbers, snubbers, and cushions, all types, excluding oleo strut assemblies	7	201,632	14,347	279,678	'17,846
35932 72	Pneumatic actuators and actuator assemblies (linear and rotary).....	9	9,323	20,357	11,149	20,351
35932 73	Accumulators and other hydraulic, pneumatic or combination devices for fluid energy absorption and/or storage	10	19,178	13,233	21,972	17,882
35932 74	Hydraulic fluid reservoirs and reservoir assemblies, including "bootstrap" reservoirs, spring pressurized reservoirs, and similar reservoirs; and reservoirs with integral valves and/or filters.....	5	4,304	16,144	5,035	16,128
35932 79	Other aerospace type fluid power cylinders, actuators, accumulators, cushions and related items, n.e.c.	11	(X)	15,052	(X)	'20,638
35939 98	Parts for aerospace type fluid power (hydraulic and pneumatic) cylinders, actuators, accumulators, cushion, and related items sold separately.....	18	(X)	57,510	(X)	'55,668
35943 —	Nonaerospace-type reciprocating pumps	(X)	(X)	277,131	(X)	279,842
35944 —	Nonaerospace-type rotary and other fluid power pumps.....	(X)	(X)	343,008	(X)	317,352
35943 15	Hydraulic (except electrohydraulic) types: Pumps, variable displacement: Axial: Closed loop	13	195,641	106,073	218,684	98,358
35943 27	Open loop	12	105,869	55,926	94,722	54,318
35943 16	All other variable displacement types	8	92,850	43,735	106,440	47,207
35944 30	Pumps, fixed displacement, open and closed loop: Internal gear type, including gerotor	21	774,463	108,485	812,577	103,384
35944 34	External gear type	13	797,174	101,071	737,364	98,950
35944 35	Vane type	4	307,607	65,333	284,981	55,441
35943 36	Radial piston type	5	46,491	22,233	52,958	24,167
35943 37	Axial piston type.....	16	163,566	49,164	155,878	55,792
35944 39	Other pump and pump packages, n.e.c.....	12	266,344	68,119	231,386	59,577
35944 11	Electrohydraulic types.....	-	-	-	-	-
35945 —	Nonaerospace-type fluid power motors.....	(X)	902,811	206,955	851,280	194,347
35945 40	Pneumatic (air) motors	2	(D)	(D)	(D)	(D)
35945 52	Hydraulic motors (except electrohydraulic types): Gear type, internal and external, including gerotor: Internal types, including gerotors	9	618,160	75,187	571,870	68,924
35945 54	External types.....	7	57,838	10,313	54,949	10,001
35945 42	Vane type, fixed and variable	9	19,043	13,475	16,216	11,810
35945 43	Radial piston type, fixed and variable	9	43,487	35,419	47,873	31,543
35945 44	Axial piston type: Fixed displacement	10	140,938	33,351	145,657	35,923
35945 45	Variable displacement.....	9	20,052	15,337	16,124	14,023
35945 48	Electrohydraulic types.....	-	-	-	-	-
35945 50	Value of drivers shipped with pumps (value only).....	8	(X)	(D)	(X)	(D)
35946 —	Aerospace-type fluid power pumps and motors	(X)	(X)	171,948	(X)	205,643
35946 71	Hydraulic pumps: Fixed and variable displacement types	10	25,738	94,171	'35,775	'118,526

See footnotes at end of table.

Table 12. **MANUFACTURER'S SHIPMENTS OF FLUID POWER PRODUCTS, INCLUDING AEROSPACE:**
BY TYPE: 1992 AND 1991—Continued

[Quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35946 —	Fluid power products—Cont.					
	Aerospace-type fluid power pumps and motors—Cont.					
	Hydraulic pumps—Cont.					
35946 72	Pump/electric motor assemblies, fixed, and variable displacement types	7	3,773	32,604	4,967	40,967
35946 73	Other pump packages, n.e.c.	7	8,179	14,342	5,776	11,697
	Motors:					
35946 83	Pneumatic (air) motors and motor packages	-	-	-	-	-
35946 86	Hydraulic motors, fixed and variable displacement types AND	3				
35946 87	Hydraulic motor packages, including motor/gearbox, motor/valve, motor/generator, and similar combination units	6	4,469	30,831	4,899	34,453
35949 —	Parts for fluid power pumps, motors, and hydrostatic transmissions	(X)	(X)	356,184	(X)	353,581
	Hydraulic:					
35949 91	Nonaerospace ²	47	(X)	304,120	(X)	296,416
35949 93	Aerospace	9	(X)	52,064	(X)	57,165
	Pneumatic:					
35949 95	Nonaerospace	2	(X)	(²)	(X)	(²)
35949 97	Aerospace	-	(X)	-	(X)	-

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. n.e.c. Not elsewhere classified. ¹Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹For 1992 "Other nonaerospace hydraulic cylinders" were combined with "Nonaerospace electrohydraulic cylinders."

²Parts for nonaerospace pumps and motors for hydraulic and pneumatic were combined to avoid disclosure of individual company data.

Table 13. **SHIPMENTS, EXPORT, AND IMPORTS OF FLUID POWER PRODUCTS: 1992**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Manufacturer's shipments		Export shipments ¹		Import shipments ²	
		Quantity	Value	Quantity	Value	Quantity	Value
	Fluid power products	(X)	6,249,324	7,674,079	532,755	17,625,513	580,468
34921	Hydraulic valves, nonaerospace	11,812,990	625,558	1,700,992	114,867	8,431,121	82,836
34922	Pneumatic valves, nonaerospace	24,187,736	463,018	1,132,791	44,263	2,349,263	49,218
34923	Aerospace hydraulic and pneumatic valves	1,313,402	439,270	(NA)	(NA)	(NA)	(NA)
34927	Parts for hydraulic and pneumatic valves ..	(X)	144,687	2,087,112	41,505	4,911,420	40,596
34924	Fittings for metal and plastic tubing, including assemblies, nonaerospace	(X)	454,744	(NA)	(NA)	(NA)	(NA)
34925	Fittings and couplings for hose, including assemblies, nonaerospace	(X)	574,713	(NA)	(NA)	(NA)	(NA)
34926	Aerospace fittings for tube and hose, including assemblies	(X)	343,085	(NA)	(NA)	(NA)	(NA)
35692	Filters for hydraulic and pneumatic fluid power systems	(X)	383,868	(NA)	(NA)	(NA)	(NA)
35931	Hydraulic and pneumatic cylinders and related items, nonaerospace	(X)	930,951	365,109	83,280	890,474	125,466
35932	Aerospace hydraulic and pneumatic cylinders	(X)	412,409	80,784	14,338	9,890	1,330
35939	Parts for hydraulic and pneumatic cylinders and related items	(X)	169,095	(NA)	(NA)	(NA)	(NA)
35941 10	Fluid power pumps and motors	(X)	999,042	2,307,291	234,502	1,033,345	176,880
35942 10	Parts for pumps and motors	(X)	356,184	(X)	(X)	(X)	104,142

(NA) Not available. (X) Not applicable.

¹Source: Bureau of the Census report, EM 545, *U.S. Exports*.²Source: Bureau of the Census report, IM 145, *U.S. Imports for Consumption*.**HISTORICAL NOTE**

Data on fluid power products have been collected by the Bureau of the Census since 1981. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

FUNDING

The MA35N survey is funded by the National Fluid Power Association.

CONTACT FOR DATA USERS

For additional information about these data, contact Jerry Roth, 301-763-7860 or Lynn Sizemore, 301-763-7860.

9.5 PUMPS AND COMPRESSORS

INTRODUCTION

This survey covers companies engaged in manufacturing industrial pumps (reciprocating, turbine, centrifugal, and rotary pumps); domestic water systems, including domestic sump pumps; oil well and oilfield pumps; air compressors; gas compressors; and vacuum pumps. Very small firms (generally less than five employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies are excluded. Excluded from this survey are hand pumps; measuring and dispensing pumps; automotive circulating pumps; hydraulic fluid power pumps; paint-spraying equipment; compressors for ice making, refrigeration equipment, and air-conditioning units; and replacement and repair parts for pumps and compressors.

The statistics in this publication were collected by mail on Bureau of the Census annual Form MA35P, Pumps and Compressors. The survey panel includes all known manufacturers of the covered products, except the very small firms excluded from the scope of the survey. Approximately 331 companies are included. No estimate is derived for the small firms excluded from the survey.

SUMMARY OF FINDINGS

In 1992, manufacturers' shipments of pumps and compressors totaled \$5,157.0 million, an increase of 1 percent from the 1991 figure of \$5,119.0 million. The 1992 total includes industrial pumps, \$2,201.9 million, a decrease of 3 percent from the 1991 total of \$2,262.8 million; compressors and vacuum pumps, \$2,078.2 million, an increase of 4 percent from the 1991 total of \$1,993.0 million; domestic water systems, \$279.8 million, an increase of 3 percent from the 1991 total of \$272.6 million; and other pumps, \$597.1 million, an increase of 1 percent from the 1991 total of \$590.1 million.

EXPLANATION OF TERMS

Pumps. A device for raising, transferring, or moving fluids or for attenuating gases by suction or pressure or both.

Driver. An electric motor, or a prime mover, such as a steam engine, a steam or gas turbine, or an internal combustion engine.

Reciprocating Pumps:

Direct-Acting Steam-Driven. A reciprocating pump and a steam engine built together as a unit. The power to drive the pump is furnished by the steam engine.

Power-Operated, Other Than Steam. A reciprocating pump driven by power from an outside source applied to the crankshaft of the pump.

Vertical Turbine Pumps (Including Deep Well). A submersible pump system, over 5 horsepower. Submersible pump systems, 5 horsepower and under, are included in domestic water systems.

Centrifugal Pumps:

Classes of Pumps:

Centrifugal Pump. A pump in which the pressure is developed principally by the action of centrifugal force. Pumps in this class with single inlet impellers usually have a specific speed below 4,200, and with double suction impellers, a specific speed of below 6,000. In pumps of this class, the liquid normally enters the impeller at the hub and flows radially to the periphery.

Frame-Mounted Pumps. A pump design in which the impeller is mounted on a shaft, held in a bearing frame and coupled to a motor with a flexible coupling.

Close-Coupled Pumps. A pump design in which the impeller is mounted on the motor shaft.

Mixed Flow Pump. A pump in which the head is developed partly by centrifugal force and partly by the lift of the vanes on the liquid. This type pump has a single inlet impeller with the flow entering axially and discharging in an axial and radial direction. Pumps of this type usually have a specific speed from 4,200 to 9,000.

Axial Flow Pump. A pump of this type, sometimes called a propeller pump, develops most of its head by the propelling or lifting action of the vanes on the liquid. It has a single inlet impeller, with the flow entering axially and discharging nearly axially. Pumps of this type usually have a speed above 9,000.

Types of Pumps:

Single-Stage Pump. A pump in which the total head is developed by one impeller.

Multistage Pump. A pump having two or more impellers acting in series in one casing.

Single-Suction Pump. A pump equipped with one or more single suction impellers.

Double-Suction Pump. A pump equipped with one or more double suction impellers.

Rotary Pumps. A positive displacement pump, consisting of a fixed casing containing gears, cams, screws, vanes, plungers, or similar elements actuated by rotation of the drive shaft. These pumps are characterized by their close running clearances and the absence of suction and discharge valves.

Domestic Water Systems. Water supply pumps for household and farm use. A pump sold separately as well as a complete system containing driver, tank, and fittings. Includes submersible pump systems 5 horsepower and under. Submersible pump systems over 5 horsepower are reported as vertical turbine pumps. Excluded are irrigation pumps, which are reported under industrial pumps by class and type of pump.

Jet Pump. A pump with built-in jet (ejector) assembly for either shallow or deep well use.

Convertible Jet Pump. A pump with separate jet (ejector) assembly which permits installation as or conversion to either shallow or deep well settings.

Nonjet Pump. An electrical reciprocating piston pump for shallow or deep well use.

Submersible Pump. A pump completely submerged in water (well, pond, reservoir, etc.) which utilizes a series of impellers and diffusers (stages) on a single shaft, or a helical rotor-positive displacement design propelled by an oilfilled or water-lubricated motor.

Domestic Hand Pumps, Etc.. Hand, windmill, or engine-driven well pumps not electrically powered.

Oil Well and Oilfield Pumps. Included are pumps especially designed for oil well and oilfield applications.

Vacuum Pumps. A device for withdrawing air, gas, or airgas mixtures from piping systems, enclosed vessels, or enclosed spaces, discharging the air to the atmosphere, and removing the moisture.

Compressors. Devices for compressing gases, such as air, for motive power or natural gas for the transfer of gas or for the recovery of liquid hydrocarbons.

Stationary Air Compressors. Air compressors that are intended for permanent installation and are not typically mobile.

Portable Air Compressors. Air compressors which are mountable on wheels, skids, or motor trucks in order to be typically mobile.

Gas Compressors. Engine-compressor units that generally consist of an integral engine compressor block that houses both the engine and compressor. In such machines, the engine pistons and compressor pistons are mounted on a common crankshaft.

Table 14. QUANTITY AND VALUE OF SHIPMENTS OF PUMPS AND COMPRESSORS: 1992 AND 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35611 —	Pumps and compressors	335	16,429,197	5,157,016	15,678,949	5,119,022
35611 98	Industrial pumps	(X)	5,017,165	2,201,870	5,122,522	2,262,760
	Value of drivers (reported separately) ¹	130	(X)	384,546	(X)	422,601
	Reciprocating pumps	(X)	256,319	114,883	236,544	111,837
35611 01	Direct-acting steam-driven	4	28	4,605	65	4,486
35611 02	Electric motor driven	28	230,550	95,779	210,749	98,651
35611 04	Engine driven	11	25,741	14,499	25,730	13,186
	Turbine pumps, vertical, including deep-well ..	(X)	33,121	188,591	33,418	199,040
35611 05	Submersible, over 5 hp	20	12,356	62,907	11,134	57,748
	Other than submersible:					
35611 07	Up to 8" diameter bowl size	11	3,131	15,083	3,920	22,182
35611 08	Over 8" to 16" diameter bowl size	14	16,404	83,022	16,863	89,548
35611 10	Over 16" diameter bowl size	9	1,230	27,579	1,501	29,562
	Centrifugal pumps	(X)	3,406,613	1,148,452	3,553,715	1,194,601
	Submersible centrifugal pumps (except submersible sump pumps):					
	Submersible effluent pumps (less than 1" solids handling capacity):					
35611 83	1/4 to 3/4 hp	10	124,375	12,654	110,883	11,539
35611 84	1 hp and over	7	8,353	5,688	9,034	5,018
	Submersible solids handling pumps (solids 1" to 2" inclusive):					
35611 85	1/3 to 1/2 hp	9	126,464	23,076	134,145	26,329
35611 86	3/4 hp and over	11	14,496	8,307	18,230	8,577
	Submersible nonclog pumps (greater than 2" solids handling capacity):					
35611 87	3" discharge outlet and under	11	15,398	7,548	16,862	8,141
35611 88	4" to 6" discharge outlet	13	5,328	13,309	8,812	12,942
35611 89	7" and 8" discharge outlet	7	133	803	92	579
35611 90	9" to 12" discharge outlet AND	4				
35611 91	Over 12" discharge outlet	3	85	1,324	117	1,153
	Single stage, single suction, close coupled:					
35611 11	1/2" discharge outlet and under	13	89,726	6,477	102,742	6,314
35611 12	3/4" and 1" discharge outlet	35	230,466	30,574	222,973	29,783
35611 14	1-1/4" and 1-1/2" discharge outlet	50	310,708	73,436	298,445	71,009
35611 15	2" and 2-1/2" discharge outlet	51	109,138	46,200	106,084	43,115
35611 16	3" and 4" discharge outlet	48	23,492	25,329	29,543	28,512
35611 19	Over 4" discharge outlet	31	19,583	37,390	12,714	26,354
	Single stage, single suction, frame mounted:					
35611 21	1/2" discharge outlet and under AND	7				
35611 22	3/4" and 1" discharge outlet	45	624,166	54,306	666,069	57,899
35611 23	1-1/4" and 1-1/2" discharge outlet	52	32,155	39,101	33,010	42,518
35611 24	2" and 2-1/2" discharge outlet	54	36,429	64,547	38,359	69,344
35611 25	3" discharge outlet	56	27,688	56,074	29,623	55,132
35611 26	4" to 6" discharge outlet	48	28,024	90,279	29,353	88,774
35611 29	Over 6" discharge outlet	36	8,257	73,054	8,209	71,060
	Single stage, double suction:					
35611 42	Under 4" discharge outlet	19	5,260	8,407	6,285	9,850
35611 44	4" and 5" discharge outlet	19	5,409	18,821	6,089	23,413
35611 46	6" and 7" discharge outlet	18	4,398	21,436	4,570	24,716
35611 48	8" to 12" discharge outlet	22	4,062	29,081	4,575	36,261
35611 49	Over 12" discharge outlet	13	458	14,539	627	36,941
	Multistage (single or double suction):					
35611 52	1-1/2" discharge outlet and under	20	25,129	13,678	26,026	13,784
35611 54	2" and 3" discharge outlet	21	5,823	37,111	5,467	31,095
35611 56	4" and 5" discharge outlet	19	1,209	37,160	954	31,131
35611 58	6" and 7" discharge outlet	11	151	17,146	142	13,118
35611 59	8" and over discharge outlet	9	56	8,900	102	21,692
	Propeller and mixed flow:					
35611 62	20" and under	16	2,029	18,499	1,952	16,999
35611 64	Over 20"	17	571	34,673	511	40,297
	All other centrifugal pumps, including can, etc.:					
35611 65	1-1/2" discharge outlet and under	22	1,381,135	75,391	1,523,892	73,439
35611 66	2" to 6" discharge outlet	21	134,162	47,053	94,327	51,336
35611 69	Over 6" discharge outlet	11	2,297	97,081	2,897	106,437

See footnotes at end of table.

Table 14. QUANTITY AND VALUE OF SHIPMENTS OF PUMPS AND COMPRESSORS: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35611 —	Pumps and compressors—Cont.					
	Industrial pumps—Cont.					
	Rotary pumps.....	(X)	877,267	218,615	851,246	203,204
	100 psi and under, designed pressure:					
35611 70	10 G.P.M. and under, designed capacity .	26	484,577	44,266	460,355	41,494
35611 71	11 to 99 G.P.M., designed capacity.....	22	100,447	31,613	98,420	28,967
35611 72	100 to 299 G.P.M., designed capacity . . .	13	20,725	13,851	19,714	12,473
35611 73	300 G.P.M. and over, designed capacity .	11	3,431	7,685	3,563	9,777
	101 to 250 psi, designed capacity:					
35611 74	10 G.P.M. and under, designed capacity .	13	119,894	20,749	134,350	21,488
35611 75	11 to 99 G.P.M., designed capacity.....	16	42,140	43,543	37,938	37,626
35611 76	100 G.P.M., and over, designed capacity.	14	18,775	31,021	19,332	30,223
	251 to 500 psi, designed pressure:					
35611 77	10 G.P.M. and under, designed capacity .	7	80,900	7,055	71,751	7,149
35611 78	11 G.P.M., and over, designed capacity . .	9	4,771	14,824	4,441	10,918
35611 79	Over 500 psi, designed pressure.....	5	1,607	4,008	1,382	3,089
	Diaphragm pumps.....	(X)	443,845	146,783	447,062	126,991
35611 82	Single diaphragm.....	14	(D)	(D)	(D)	(D)
35611 92	More than one diaphragm.....	9	(D)	(D)	(D)	(D)
35611 97	Other industrial pumps, not elsewhere classified.....	20	58,509	39,653	73,537	39,929
35613 —	Domestic water systems.....	(X)	1,677,978	279,793	1,617,572	272,621
35613 13	Jet pump and convertible jet pump systems ² AND	20				
35613 20	Nonjet pump systems (except submersible) ² .	8	854,765	112,253	811,770	106,696
	Submersible pump systems, 5 hp and under ² :					
35613 26	Up to 1 hp.....	18	686,034	127,341	666,541	123,665
35613 27	Over 1 hp to 3 hp.....	14	99,795	25,432	99,023	27,206
35613 28	Over 3 hp.....	15	29,371	13,544	27,151	13,247
35613 70	Domestic hand and windmill pumps, pump jacks, and cylinders (sold separately) ²	4	8,013	1,223	13,087	1,807
35615 —	Other pumps.....	(X)	7,292,606	597,111	6,771,059	590,594
35615 98	Value of drivers (reported separately) ¹	14	(X)	75,967	(X)	70,087
35615 99	Other pumps, excluding domestic water systems and sump pumps ¹	4	(X)	3,203	(X)	4,761
	Oil well and oilfield pumps (except boiler-feed).....	(X)	169,493	210,137	182,760	205,873
35615 11	Subsurface pumps for oil well pumping . . .	10	163,516	183,971	173,939	175,021
35615 13	Mud pumps (slush pumps).....	6	402	16,879	452	16,919
35615 15	Other oil well and oilfield pumps.....	6	5,575	9,287	8,369	13,933
	Domestic sump pumps, 1 hp and under.....	(X)	1,773,305	97,142	1,942,954	103,067
35615 73	Pedestal.....	21	270,441	12,963	343,154	16,295
	Submersible:					
35615 77	1/3 hp and under.....	20	1,414,942	76,775	1,495,322	77,649
35615 78	Over 1/3 hp.....	12	87,922	7,404	104,478	9,123
35615 93	Packaged pump units assembled from purchased pumps AND	1				
35615 95	Hot water heating circulator pumps AND	5				
35615 97	Other pumps (except automotive), including oil burner and appliance pumps, fire engine pumps, laboratory pumps, etc.	22	5,349,808	210,662	4,645,345	206,806
35631 —	Compressors and vacuum pumps.....	(X)	2,441,448	2,078,242	2,167,796	1,993,047
35631 98	Value of drivers (reported separately) ¹	44	(X)	288,569	(X)	267,643
	Air compressors.....	(X)	2,106,905	986,606	1,836,849	915,229
	Stationary.....	(X)	772,777	609,376	770,313	610,751
	Reciprocating, single acting.....	(X)	680,106	213,487	678,142	210,048
35631 01	1-1/2 hp and under.....	19	463,907	38,416	454,878	39,589
35631 02	Over 1-1/2 hp to 5 hp.....	24	158,423	77,710	163,763	72,586
35631 03	6 hp to 25 hp.....	22	56,456	78,350	57,683	80,522
35631 04	26 hp and over.....	12	1,320	19,011	1,818	17,351
	Reciprocating, double acting.....	(X)	430	21,976	711	32,417
35631 05	150 hp and under.....	8	345	14,954	562	17,776
35631 06	151 hp and over.....	5	85	7,022	149	14,641

See footnotes at end of table.

Table 14. QUANTITY AND VALUE OF SHIPMENTS OF PUMPS AND COMPRESSORS: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35631 —	Pumps and Compressors—Cont. Compressors and vacuum pumps—Cont. Air compressors—Cont. Stationary—Cont. Rotary positive	(X)	72,689	232,730	75,412	230,190
35631 07	Discharge pressure 50 PSIG and under, all hp sizes	8	54,914	19,844	57,800	21,881
	Discharge pressure of 51 PSIG and over:					
35631 10	10 hp and under	7	1,214	3,385	1,331	3,403
35631 11	11 to 40 hp	14	5,338	38,710	4,654	34,504
35631 12	41 to 150 hp	14	9,776	100,946	9,956	92,742
35631 13	151 to 300 hp	9	1,001	38,804	1,206	46,014
35631 15	301 hp and over	6	446	31,041	465	31,646
	Centrifugal and axial	(X)	19,552	141,183	16,048	138,096
35631 14	50 PSIG and below AND 51 PSIG and over:	7				
35631 17	350 hp and under AND	3				
35631 19	351 hp and over	5	19,552	141,183	16,048	138,096
	Portable	(X)	1,334,128	377,230	1,066,536	304,478
35631 29	Under 11 C.F.M.	9	1,212,516	206,506	961,831	137,687
35631 33	11 to 74 C.F.M.	9	108,623	29,390	91,842	26,736
35631 34	75 to 124 C.F.M.	8	882	5,448	1,130	6,426
35631 36	125 to 249 C.F.M.	11	8,675	60,448	8,392	58,809
35631 37	250 to 599 C.F.M.	6	1,534	18,180	1,469	17,056
35631 38	600 to 899 C.F.M.	6	1,327	32,873	1,414	36,103
35631 39	900 C.F.M. and over	5	571	24,385	458	21,661
	Gas compressors	(X)	4,261	539,256	4,541	541,831
	Stationary, centrifugal and axial	(X)	405	212,379	359	198,366
35631 42	Natural gas	5	94	133,418	126	137,039
35631 43	All other gases	5	311	78,961	233	61,327
	Reciprocating and rotary	(X)	3,856	326,877	4,182	343,465
	Stationary reciprocating:					
	Integral engines: ²					
35631 46	2,000 hp and under ² AND	2				
35631 47	2,001 to 4,000 hp ² AND	2				
35631 48	4,001 hp and over ²	1	83	59,786	252	131,681
	Other than integral engines:					
35631 51	1,000 hp and under	16	3,068	168,810	3,210	136,681
35631 53	1,001 hp and over	5	333	87,297	348	65,167
35631 56	Stationary rotary positive	6	372	10,984	372	9,936
35631 89	Other compressors, including compressor packages	7	20,752	25,636	19,653	29,353
	Vacuum pumps, including laboratory	(X)	250,720	133,407	256,040	136,577
35631 93	Low vacuum, 29.5" mercury vacuum and lower	25	187,359	76,658	184,934	75,088
35631 94	High vacuum 29.6" mercury vacuum and over	16	63,361	56,749	71,106	61,489
35631 96	Packaged compressor units assembled from purchased compressors	10	58,810	104,768	50,713	102,414

(D) Data withheld to avoid disclosing figures for individual companies.

¹Revised by 5 percent or more from previously reported figures.

(X) Not applicable.

¹The value of drivers was reported only at the product class level. For each product line, value figures exclude (except as noted for codes 35613 13-70 and 35631 46-48) the value of drivers (electric motor or prime movers) shipped with that product. The extent to which some respondents may have included the value of drivers with the value of specific pumps or compressors is unknown.

²Includes the value of drivers.

Table 15. SHIPMENTS, EXPORTS, AND IMPORTS OF PUMPS AND COMPRESSORS: 1992 and 1991

[Quantity in number of units; value in thousands of dollars]

Product description	Manufacturers' shipments		Export shipments ¹		Import shipments ²	
	Quantity	Value f.o.b. plant	Quantity	Value ²	Quantity	Value ⁴
1992						
INDUSTRIAL PUMPS						
Pumps, excluding drivers	13,987,749	2,628,091	1,374,001	549,456	16,663,528	335,568
Reciprocating pumps	256,319	114,883	32,299	38,917	360,687	33,819
Turbine pumps	33,121	188,591	11,072	27,511	788	2,534
Centrifugal pumps—submersible	294,632	72,709	141,918	41,040	95,497	20,606
Centrifugal pumps—single stage, single suction, close coupled	783,113	219,406	167,897	31,917	85,726	31,297
Centrifugal pumps—single stage, single suction, frame mounted	756,719	377,431	13,802	30,223	25,630	8,004
Centrifugal pumps—single stage, double suction	19,587	92,284	1,524	3,965	1,083	2,136
Centrifugal pumps—multistage, single or double suction	32,368	113,995	5,681	31,292	4,316	6,771
Other centrifugal pumps, including propeller and mixed flow	1,520,194	272,697	25,617	82,887	702,074	75,891
Rotary pumps	877,267	231,578	48,179	85,473	239,460	32,325
Diaphragm pumps, all types	443,845	146,783	25,535	24,998	23,609	10,763
Domestic water systems	1,677,978	279,793	(⁵)	(⁵)	(⁵)	(⁵)
Domestic sump pumps, 1 hp and under ⁵	1,773,305	97,142	175,137	15,610	5,408,458	10,530
Oil well and oilfield pumps (except boiler feed)	169,493	210,137	3,965	41,531	1,018	4,013
Other pumps, including hot water heating circulator pumps	5,349,808	210,662	721,375	94,092	9,715,182	96,879
COMPRESSORS						
Compressors, excluding drivers	2,382,638	1,684,905	444,041	408,264	4,674,652	362,616
Air compressors—stationary, reciprocating, single acting	680,106	213,487	(⁶)	(⁶)	(⁶)	(⁶)
Air compressors—stationary, reciprocating, double acting ⁶	430	21,976	133,190	59,937	107,672	30,395
Air compressors—stationary, rotary positive	72,689	232,730	(⁷)	(⁷)	(⁷)	(⁷)
Air compressors—stationary, centrifugal and axial	19,552	141,183	79,093	75,365	501,293	97,591
Air compressors—portable	1,334,128	377,230	9,131	83,347	2,520,260	45,942
Gas compressors—centrifugal and axial	405	212,379	(⁷)	(⁷)	(⁷)	(⁷)
Gas compressors—reciprocating and rotary	3,856	326,877	(⁷)	(⁷)	(⁷)	(⁷)
Other compressors, including compressor packages	20,752	25,636	3,876	136,726	11,287	61,601
SELECTED PUMPS						
Vacuum pumps	250,720	133,407	218,751	52,889	1,534,140	127,087

See footnotes at end of table.

Table 15. **SHIPMENTS, EXPORTS, AND IMPORTS OF PUMPS AND COMPRESSORS: 1992 and 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product description	Manufacturers' shipments		Export shipments ¹		Import shipments ³	
	Quantity	Value f.o.b. plant	Quantity	Value ²	Quantity	Value ⁴
1991						
INDUSTRIAL PUMPS						
Pumps, excluding drivers	13,507,153	2,628,526	1,870,998	578,588	28,335,391	300,669
Reciprocating pumps	236,544	116,323	57,532	46,095	158,170	27,770
Turbine pumps	33,418	199,040	5,667	25,842	2,344	3,132
Centrifugal pumps—submersible	298,175	74,278	145,288	31,401	116,615	21,914
Centrifugal pumps—single stage, single suction, close coupled	772,501	205,087	188,552	35,328	101,123	22,722
Centrifugal pumps—single stage, single suction, frame mounted	804,623	384,727	14,113	32,666	37,999	7,985
Centrifugal pumps—single stage, double suction ...	22,146	131,181	1,340	7,321	7,012	761
Centrifugal pumps—multistage, single or double suction	32,691	110,820	5,177	34,689	2,783	6,123
Other centrifugal pumps, including propeller and mixed flow	1,623,579	288,508	83,248	71,558	554,044	72,488
Rotary pumps	851,246	203,204	118,150	74,817	227,546	28,581
Diaphragm pumps, all types	447,062	126,991	49,350	25,540	15,996	7,595
Domestic water systems	1,617,572	272,621	(⁵)	(⁵)	(⁵)	(⁵)
Domestic sump pumps, 1 hp and under ⁵	1,942,954	103,067	67,013	7,887	15,769	624
Oil well and oilfield pumps (except boiler feed)	182,760	205,873	3,347	50,239	1,041	10,027
Other pumps, including hot water heating circulator pumps	4,645,345	206,806	1,132,221	135,205	27,094,949	90,947
COMPRESSORS						
Compressors, excluding drivers	2,117,083	1,622,990	519,002	666,349	4,100,260	366,318
Air compressors—stationary, reciprocating, single acting	678,853	210,048	(⁶)	(⁶)	(⁶)	(⁶)
Air compressors—stationary, reciprocating, double acting	711	32,417	167,790	68,165	174,098	38,165
Air compressors—stationary, rotary positive	75,412	230,190	(⁷)	(⁷)	(⁷)	(⁷)
Air compressors—stationary, centrifugal and axial ...	16,048	138,096	60,260	81,497	326,264	58,994
Air compressors—portable	1,066,536	304,478	23,888	92,447	2,046,806	43,093
Gas compressors—centrifugal and axial	359	198,366	(⁷)	(⁷)	(⁷)	(⁷)
Gas compressors—reciprocating and rotary	4,182	343,465	(⁷)	(⁷)	(⁷)	(⁷)
Other compressors, including compressor packages	19,653	29,353	6,107	360,690	28,563	103,968
SELECTED PUMPS						
Vacuum pumps	256,040	136,577	260,957	63,550	1,524,529	122,098

¹Source: Bureau of Census report EM 545, *U.S. Exports*.²Excludes the value of drivers.³Source: Bureau of Census report IM 145, *U.S. Imports for Consumption*.⁴This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus import duties.⁵For export and import shipments, "Domestic water systems" are combined with "Domestic sump pumps."⁶For export and import shipments, "Single acting and double acting stationary air compressors" are combined.⁷For export and import shipments, "Centrifugal and axial, reciprocating, and other gas compressors" are combined.

HISTORICAL NOTE

Data on pumps and compressors have been collected by the Bureau of the Census since 1960. Data on hydraulic fluid power pumps and motors formerly collected on this survey are now included in the Current Industrial Report, MA35N, Fluid Power Products. Historical data may be obtained from Current Industrial Reports available at your local Federal

Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Richard Wiesler, 301-763-7867 or Lynn Sizemore, 301-763-5547.

9.6 ANTIFRICTION BEARINGS

INTRODUCTION

These data cover companies engaged in the manufacture of complete antifriction bearings and components, including balls and rollers, in the United States.

The statistics were collected by mail on Bureau of the Census annual Form MA35Q, Antifriction Bearings. The survey panel includes all known producers of these products, approximately 87 companies.

SUMMARY OF FINDINGS

The value of shipments of complete antifriction bearings and components, including balls and rollers, was \$4,101.3 million in 1992, an increase of 9 percent over shipments of \$3,778.9 million in 1991. The 1992 total includes complete ball bearings, \$1,626.0 million, an increase of 16 percent over the 1991 value of shipments; complete tapered roller bearings and roller bearing parts (except rollers), \$935.6 million, an increase of 7 percent; other complete roller bearings, \$773.1 million, a decrease of 3 percent; mounted bearings (except plain), \$343.3 million, an increase of 6 percent; and parts and components for ball and roller bearings, sold separately, \$423.3 million, an increase of 12 percent.

EXPLANATION OF TERMS

Antifriction Bearing. A bearing using rolling elements, i.e., balls or rollers. Plain bearings, i.e., those with no rolling elements, are not included.

Ball Bearings, Complete. An antifriction bearing using balls as rolling elements.

Annular Ball Bearing. An antifriction bearing primarily designed to support load perpendicular to shaft axis. More commonly called "radial" ball bearing.

Ground or Precision. Excludes all unground ball bearings.

Single Row Conrad-Ball Bearing. A deep groove ball bearing with only one row of balls and a cage (i.e., retainer, separator). Included are all standard and special types, all inner race configurations (extended, wide, etc.) and all outer race configurations (spherical O.D., cylindrical O.D., wide, etc.).

Miniature Ball Bearing. Ball bearing with outside diameter below, but not including, 3/8" or 9 mm O.D.

ABEC 1 and ABEC 3. The "regular" standards of ground ball bearing precision.

ABEC 5 and Up. The higher, or "precision" standards of ground ball bearing precision.

Single Row Maximum Capacity Type. Distinguished from the conrad type by a filling slot in both outer and inner rings, which allows the bearing to contain a greater number of larger balls than the corresponding conrad bearing without filling slots. Also known as "max" type, "full complement," or "filling slot" ball bearings.

Integral Shaft and Integral Spindle Ball Bearing. Have a solid inner race, i.e., a shaft that has the ball raceway(s) ground into the shaft surface, thus making the inner race/shaft integral to the bearing. Examples include, but are not restricted to, water pump bearings, some automotive hub units, and computer spindle bearings.

Double Row Ball Bearing. A unitary bearing with two rows of balls. Includes both angular contact and deep groove types, and both conrad and max types. All ABEC 1 and up of all standard and special configurations are included, but self-aligning double row bearings are not included.

Angular Contact Ball Bearings. Have a single row of balls whose internal clearances and ball race locations result in a definite contact angle and predetermined relationship of inner to outer ring faces. All standard and special configurations and all ABEC 1 and up precisions are included.

All Other Ground or Precision (ABEC 1 and Up) Ball Bearings. All radial ball bearings not covered previously. This category includes only those ground ball bearings, etc., which are not classified above. It includes linear ball bearings.

Ground Ball Bearings of (Less Than ABEC 1) Precision. All types of radial (single row, double row, angular contact, and other) ball bearings which have ground raceways but are less than the ABEC 1 precision grade.

Unground, Including Self Aligning (Less than ABEC 1). Antifriction ball bearings with unground raceways. All radial types, styles, and configurations are included.

Thrust Ball Bearings. Concentric axial loading only, both ground (less than ABEC 1 and up) and unground types, of all configurations. Both single direction thrust and double direction thrust ball bearings are included. Angular contact bearings are not included.

Other Ball Bearings. Bearings that do not qualify under any of the previous categories. This category only includes bearings that are not listed above.

Tapered Roller Bearing. An antifriction bearing using taper-shaped rollers as rolling elements.

Cup and Cone Assemblies Shipped as a Set. This is a complete tapered roller bearing, which includes the cup and cone and roller assembly, each part of which may be sold separately.

Cups. Tapered bearing outer races.

Cone Assemblies. Tapered bearing inner race, with cage and rollers.

Other Parts, Except Rollers. Includes cages, spacers, railroad end caps, and other miscellaneous items.

Cylindrical Roller Bearing. An antifriction bearing using cylindrical shaped rollers as the rolling elements. Axes of rollers are parallel to the bearing axis. Regular (ABEC 1 and 3) and Precision (ABEC 5 and up) are reported separately, but within each category all types and configurations are included: single row and multirow, radial and thrust, traction motor, journal, aeroengine, and others, except those classified as needle roller bearings, as defined below.

Spherical Roller Bearing. A self-aligning antifriction bearing using convex (spherical, or barrel-shaped) or concave (hourglass shaped) rollers as the rolling elements. Within

each category of single row and double row types, all configurations of radial and thrust, and all precisions are included: geared outer, spherangular, air frame, and all other similar types.

Needle Roller Bearing. An antifriction bearing using "needle" roller elements. Needle rollers are cylindrically shaped, but are long and slim, with a uniform diameter not exceeding 5 mm and a length of at least three times the diameter. The ends of the rollers may be of several shapes.

Linear Bearings. A roller bearing designed for linear relative motion between its raceways in the direction of rolling. Only includes linear roller bearings. Those pertaining to ball bearings are included in "All other ground or precision ball bearings" category.

Other Roller Bearings Not Specified Above. This category includes roller bearings not classified above.

Mounted Bearings, Except Plain. Antifriction ball or roller bearings which are encased (mounted) in an enclosure (a mounting, or housing closure) that is usually made of iron, steel, or rubber. The enclosure, or housing, may be of one piece (unit) or two-piece (split) construction. Major types included are pillow blocks, flange units, takeup units, "rubber tired" bearings, and any other types of mounted bearings. Loose inserts sold separately are not included here, but are included in appropriate bearing categories above.

Table 16. **VALUE OF SHIPMENTS FOR COMPLETE ANTIFRICTION BEARINGS AND COMPONENTS, INCLUDING BALLS AND ROLLERS, BY PRODUCT CLASS: 1982 TO 1992**

[Millions of dollars]

Product code	Product description	1992	1991	1990	1989 ¹	1988	1987	1986	1985	1984	1983	1982
3562-	Ball and roller bearings . . .	4,101.3	3,778.9	4,064.2	3,965.3	3,899.2	3,550.9	3,349.3	3,508.9	3,534.9	2,956.0	2,891.2
35621	Ball bearings, complete .	1,626.0	1,406.7	1,469.0	1,420.9	1,497.6	1,312.2	1,298.6	1,363.2	1,375.8	1,107.2	1,071.0
35622	Tapered roller bearings, cups and cones	935.6	876.8	977.3	963.9	745.7	754.6	667.0	734.2	776.5	692.0	695.4
35623	Roller bearings, complete	773.1	794.3	872.4	849.6	834.3	737.9	703.6	706.3	679.5	586.5	594.9
35624	Mounted bearings (except plain)	343.3	322.9	362.9	344.9	358.2	305.6	298.2	303.0	295.9	245.2	239.9
35629	Parts and components for ball and roller bearings, including balls and rollers sold separately	423.3	378.3	382.6	386.1	463.4	440.6	381.9	402.2	407.1	325.1	290.1

¹Data for 1988 and earlier years may not be directly comparable due to reclassifications.

Table 17. QUANTITY AND VALUE OF SHIPMENTS OF ANTIFRICTION BALL AND ROLLER BEARINGS, COMPONENTS, AND PARTS: 1992 AND 1991

[Quantity in thousands of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3562 —	Antifriction bearings and components.....	(X)	(X)	4,101,269	(X)	3,778,923
35621 —	Ball bearings, complete	52	539,814	1,625,980	433,179	1,406,664
	Annular, including self-aligning:					
	Ground or precision:					
	Single row conrad:					
	Miniature (below 9 mm O.D.):					
35621 01	Regular (ABEC 1 and 3)	5	¹ 5,569	¹ 18,695	¹ 3,893	¹ 16,311
35621 02	Precision (ABEC 5 and up)	7	(¹)	(¹)	(¹)	(¹)
	Other regular (ABEC 1 and 3):					
35621 03	9mm O.D. through 30 mm O.D.	8	58,081	52,797	50,841	46,478
35621 04	Over 30 mm O.D. through 52 mm O.D.	16	97,413	138,977	89,097	132,490
35621 05	Over 52 mm O.D. through 100 mm O.D.	16	22,349	149,615	21,744	133,648
35621 07	Over 100 mm O.D.	13	3,430	116,869	2,772	107,960
	Other precision (ABEC 5 and up):					
35621 09	9 mm O.D. through 30 mm O.D.	6	2,864	39,998	3,375	49,628
35621 11	Over 30 mm O.D. through 52 mm O.D.	9	645	36,661	702	41,544
35621 12	Over 52 mm O.D. through 100 mm O.D.	10	174	27,067	202	32,962
35621 13	Over 100 mm O.D.	9	53	41,215	63	39,487
35621 14	Single row maximum capacity type	6	1,228	18,663	1,106	18,758
	Integral shaft and integral spindle ball bearings:					
35621 15	Not over 30 mm O.D.	2	(D)	(D)	4,671	11,379
35621 17	Over 30 mm O.D.	5	(D)	(D)	(D)	(D)
35621 16	Double row	12	20,344	134,556	¹ 14,121	¹ 89,767
	Angular contact:					
35621 19	Regular	9	² 7,181	² 148,784	² 6,121	² 134,186
35621 22	Precision	4	(²)	(²)	(²)	(²)
35621 21	All other ground or precision bearings (ABEC 1 and up)	6	2,839	21,301	2,171	17,656
35621 23	Ground bearings of less than ABEC 1 precision	3	3,971	27,326	(D)	(D)
35621 25	Unground, including self-aligning (less than ABEC 1)	15	236,518	85,877	161,210	76,959
	Thrust ball bearings:					
35621 33	Ground	17	10,366	36,549	9,459	33,986
35621 35	Unground	4	3,553	6,409	2,667	5,986
35621 53	Linear ball bearings	1	(³)	(³)	(³)	(³)
35621 55	Other ball bearings	13	³ 35,693	³ 130,793	³ 36,341	³ 123,697
35622 —	Tapered roller bearings	9	204,124	935,573	174,681	876,759
35622 32	Cup and cone assemblies shipped as a set ..	9	13,846	279,676	9,403	260,872
35622 33	Cups shipped separately	7	92,991	210,629	80,373	200,202
35622 34	Cone assemblies shipped separately	8	97,287	445,268	84,905	415,685
35623 —	Cylindrical, spherical, needle, and other roller bearings	31	522,783	773,130	462,140	794,303
	Cylindrical roller bearings:					
35623 11	Regular (ABEC 1 and 3)	20	22,938	126,486	20,280	129,788
35623 12	Precision (ABEC 5 and up)	9	173	70,883	242	93,047
	Spherical roller bearings, including hour-glass and barrel:					
35623 24	Single row	3	274	19,481	323	24,109
35623 25	Double row	4	981	151,289	1,008	161,619
35623 41	Needle roller bearings	9	456,499	343,913	392,198	311,590
35623 51	Linear roller bearings	3	(⁴)	(⁴)	(⁴)	(⁴)
35623 93	Other roller bearings not specified above	17	⁴ 41,918	⁴ 61,078	⁴ 48,089	⁴ 74,150

See footnotes at end of table.

Table 17. **QUANTITY AND VALUE OF SHIPMENTS OF ANTIFRICTION BALL AND ROLLER BEARINGS, COMPONENTS, AND PARTS: 1992 AND 1991—Continued**

[Quantity in thousands of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3562 —	Antifriction bearings and components—Cont.					
35624 —	Mounted bearings (except plain)	13	10,258	343,270	8,986	322,897
35624 17	Ball bearings, unit and/or split mounted.	12	9,108	190,002	7,850	170,552
	Roller:					
35624 53	Unit mounted	5	1,002	125,949	960	121,565
35624 55	Split mounted	5	148	27,319	176	30,780
35629 -	Parts and components for ball and roller bearings, including balls and rollers sold separately	43	(X)	423,316	(X)	378,300
35629 11	Balls:					
	Shipments (quantity in millions of units)	14	125,419	144,060	130,789	134,327
	Production for all purposes (quantity in millions of units)	14	(S)	(X)	(S)	(X)
35629 21	Other antifriction ball and bearing components and parts, including unassembled ball bearings, cages, housing closures, races, etc	21	(X)	89,125	(X)	78,530
35629 31	Rollers:					
	Shipments (quantity in millions of units)	16	10,942	75,275	9,192	61,960
	Production for all purposes (quantity in millions of units)	16	(S)	(X)	(S)	(X)
	Other roller bearing parts and components (except rollers):					
35629 35	For tapered roller bearings (except cup and cone assemblies)	8	(X)	31,766	(X)	20,587
35629 36	For cylindrical roller bearings	4	(X)	(D)	(X)	(D)
35629 37	For spherical roller bearings	7	(X)	24,373	(X)	22,403
35629 38	For needle roller bearings	1	(X)	(D)	(X)	(D)
35629 39	For linear roller bearings	-	-	-	-	-
35629 49	For other roller bearings	4	(X)	(D)	(X)	(D)
35629 59	Housing and parts and components for housings, including housing closures, collars, spacers, sleeves, adapters, and other miscellaneous items	2	(X)	(D)	(X)	(D)

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. Revised by 5 percent or more from previously published figures. (S) Suppressed. Data do not meet publication standards of the Bureau of the Census. (X) Not applicable.

¹Data for "Precision miniature single row annular ball bearings" (product code 35621 02) are included with data for "Regular miniature single row annular ball bearings" (product code 35621 01) to avoid disclosing figures for individual companies.

²Data for "Precision angular contact annular ball bearings" (product code 35621 22) are included with data for "Regular angular contact annular ball bearings" (product code 35621 19) to avoid disclosing figures for individual companies.

³Data for "Linear ball bearings" (product code 35621 53) are included with data for "Other ball bearings" (product code 35621 55) to avoid disclosing figures for individual companies.

⁴Data for "Linear roller bearings" (product code 35623 51) are included with data for all "Other roller bearings not specified above" (product code 35623 93) to avoid disclosing figures for individual companies.

Table 18. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF ANTIFRICTION BEARINGS AND COMPONENTS, INCLUDING BALLS AND ROLLERS: 1992 AND 1991**

[Quantity in thousands of units; value and duty in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Imports for consumption ²	
	Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	Value
1992						
Radial ball bearings	³ 490,202	³ 1,452,229	³ 4,667	³ 73,990	³ 344,568	³ 430,753
Integral shaft and spindle ball bearings	(³)	(³)	(³)	(³)	(³)	(³)
Other ball bearings	49,612	173,751	31,829	138,386	34,320	102,073
Tapered roller bearings	204,124	935,573	14,216	161,729	73,646	129,677
Cylindrical roller bearings	23,112	197,369	1,371	33,606	9,789	62,960
Spherical roller bearings	1,254	170,770	4,870	32,535	503	43,995
Needle roller bearings	456,499	343,913	6,713	22,436	23,992	27,373
Other roller bearings	41,918	61,078	2,888	42,341	1,195	6,822
Mounted bearings:						
Ball	9,108	190,002	394	18,742	2,708	16,928
Roller	1,150	153,268	135	5,964	2,179	7,449
Parts for ball and roller bearings:						
Balls (quantity in millions of units)	125,419	144,060	(NA)	30,421	(NA)	7,469
Rollers (quantity in millions of units)	10,942	75,275	(NA)	26,959	(NA)	11,851
Other parts for tapered roller bearings	(X)	⁴ 203,981	(NA)	⁴ 72,221	(NA)	⁴ 134,301
Other ball bearing parts	(X)	(⁴)	(NA)	(⁴)	(NA)	(⁴)
1991						
Radial ball bearings	³ 384,711	³ 1,242,995	³ 4,602	³ 75,484	³ 298,486	³ 399,224
Integral shaft and spindle ball bearings	(³)	(³)	(³)	(³)	(³)	(³)
Other ball bearings	48,468	163,669	38,383	161,747	29,711	96,382
Tapered roller bearings	174,681	876,759	13,930	168,989	62,562	110,699
Cylindrical roller bearings	20,522	222,835	1,632	38,110	3,618	56,134
Spherical roller bearings	1,331	185,728	5,288	40,791	651	45,225
Needle roller bearings	392,198	311,590	7,299	25,207	57,358	29,071
Other roller bearings	48,089	74,150	2,778	41,876	1,029	9,530
Mounted bearings:						
Ball	7,850	170,552	281	9,324	2,446	12,377
Roller	1,136	152,345	144	9,050	2,476	7,353
Parts for ball and roller bearings:						
Balls (quantity in millions of units)	130,789	134,327	(NA)	18,320	(NA)	6,832
Rollers (quantity in millions of units)	9,192	61,960	(NA)	25,199	(NA)	9,108
Other parts for tapered roller bearings	(X)	⁴ 182,013	(NA)	⁴ 40,579	(NA)	⁴ 89,028
Other ball bearing parts	(X)	(⁴)	(NA)	(⁴)	(NA)	(⁴)

(NA) Not available. ¹Revised by 5 percent or more from previously published figure. (X) Not applicable.¹Source: Bureau of Census report EM 545, *U.S. Exports*.²Source: Bureau of Census report IM 145, *U.S. Imports for Consumption*.³Data for "Integral shaft and spindle ball bearings" are included with data for "Radial ball bearings" to avoid disclosing figures for individual companies.⁴Data for "Other ball bearing parts" are included with data for "Other parts for tapered roller bearings" to avoid disclosing figures for individual companies.**HISTORICAL NOTE**

Data on antifriction bearings have been collected by the Bureau of the Census since 1972. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also

available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Joanna Nguyen, 301-763-7872.

9.7 VENDING MACHINES (COIN-OPERATED)

INTRODUCTION

These data cover manufacturers of coin-operated vending machines in the United States. The statistics were collected by mail on Bureau of the Census annual Form MA35U, Vending Machines (Coin-Operated). The survey panel includes all known producers of this type of machine with more than 10 employees (46 companies).

SUMMARY OF FINDINGS

In 1992, manufacturers' shipments of coin-operated vending machines totaled \$552.4 million, an increase of 6 percent from the 1991 figure of \$522.1 million. Shipments of beverage vending machines increased 2 percent, from \$305.4 million in 1991 to \$311.8 in 1992. Vending machines for confections and foods increased 14 percent to \$187.3 million in 1992, from \$164.7 in 1991.

EXPLANATION OF TERMS

Hot Beverages

Instant, Freeze-Dried, or Liquid Concentrate Coffee. Hot beverages made by an instant process; i.e., prepared in a machine from powdered, freeze-dried or liquid concentrate, with options for chocolate, soup, tea and decaffeinated coffee.

Fresh-Brew or Freeze-Dried Coffee, Counter Type. Small, usually counter type vendors, with or without chocolate or hot water options.

Fresh Brew Coffee and Combinations. Brewed coffee vendors with optional chocolate, soup, tea, and decaffeinated coffee.

Soft Drink

Canned and Bottled Beverages (Refrigerated). Canned soft drinks in all sizes and bottled soft drinks in all glass package sizes.

Cup Drink (Postmix). Machines which produce soft drinks by the postmix method; machines may include automatic ice-making equipment.

Packaged Milk. Milk and flavored milk in paper, plastic, or glass containers; includes all sizes of containers.

Other Vending Machines for Beverages. Fruit or vegetable juices in all types of containers and other beverages not included above.

Confections and Food Vending Machines

Bulk Confection and Charms. Bulk confections such as candy, peanuts, single wrapped sticks of gum, ball gum, capsules, and trinkets.

Bagged Snacks and Confections. Glass-front and other vendors selling candy bars, cookies, crackers, and packaged gum, bagged snack, chips, pastry and other confections.

Ice Cream. Frozen novelties such as cones, bars, sandwiches, and other frozen desserts.

Multipurpose Food. Refrigerated, frozen or heated temperature foods in various package sizes and materials.

Other Vending Machines for Confections and Foods. Machines not classified above, such as bulk popcorn, and french fries.

Other Vending Machines

Water. Machines for filtering/treating water for dispensing by bulk into a container.

Postage Stamp. U.S. postage stamps and other types of stamps.

All Other Coin-Operated Vending Machines. Aspirin, cigars, combs, cosmetics, pencils, paper, newspapers, etc.; includes multipurpose machines for nonfood and nonbeverage items.

Table 19. VALUE OF SHIPMENTS OF COIN-OPERATED VENDING MACHINES: 1982 TO 1992

[Millions of dollars]

Year	MA35U	Annual Survey of Manufactures
1992	552.4	(NA)
1991	'522.1	478.5
1990	524.6	507.0
1989	591.8	581.7
1988	583.2	558.6
1987	521.1	'502.1
1986	469.7	454.9
1985	451.2	439.6
1984	394.4	391.1
1983	331.4	383.2
1982	318.9	'334.1

(NA) Not available.

'Revised by 5 percent or more from previously published figures.

'Source: Census of Manufactures.

Table 20. QUANTITY AND VALUE OF SHIPMENTS OF COIN-OPERATED VENDING MACHINES: 1992 AND 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Company count	1992		1991	
			Quantity	Value	Quantity	Value
	Coin-operated vending machines	47	704,394	552,394	642,875	'522,092
	Beverage vending machines	14	239,485	311,800	235,288	'305,406
	Hot beverage:					
35811 10	Instant, freeze-dried or liquid concentrate coffee ¹	4	1,148	2,770	'1,267	'2,838
35811 03	Fresh brew or freeze-dried office counter type	2	(¹)	(¹)	(¹)	(¹)
35811 04	Fresh brew coffee and combinations	6	10,281	36,254	8,571	24,433
	Soft drink:					
35811 08	Canned and bottled beverages (refrigerated) ²	10	221,804	268,514	'220,048	'273,966
35811 09	Cup (postmix)	4	(²)	(²)	(²)	(²)
35811 11	Packaged milk ³	4	6,252	4,262	5,402	4,169
35811 19	Other vending machines for beverages	1	(³)	(³)	(³)	(³)
	Confections and food vending machines	18	247,288	187,315	194,995	164,690
35811 21	Bulk confections and charms	7	151,870	16,820	106,784	11,979
35811 22	Bagged snacks and confections	10	86,539	126,056	80,465	116,519
35811 24	Ice cream and frozen ices	2	(⁴)	(⁴)	(⁴)	(⁴)
35811 25	Multipurpose food and confections ⁴	6	8,879	44,439	7,746	36,192
35811 29	Other vending machines for confections and foods	1	(⁴)	(⁴)	(⁴)	(⁴)
	Other vending machines	32	217,621	53,279	212,592	'51,996
35811 31	Cigarettes	4	(⁵)	(⁵)	(⁵)	(⁵)
35811 32	Water ⁵	3	7,536	7,306	6,874	'4,863
35811 35	Postage stamp	5	(⁵)	(⁵)	(⁵)	(⁵)
35811 49	All other vending machines	24	210,085	45,973	205,718	'47,133

'Revised by 5 percent or more from previously published figures.

¹"Fresh brew or freeze-dried office counter type machines" are included in "Instant, freeze-dried or liquid concentrate coffee machines" to avoid disclosing figures for individual companies.²"Cup (postmix) soft drink machines" are included in "Canned and bottled beverages (refrigerated) soft drink machines" to avoid disclosing figures for individual companies.³"Other vending machines for beverages" are included in "Packaged milk machines" to avoid disclosing figures for individual companies.⁴"Ice cream and frozen ices machines and other vending machines for confections and foods" are included in "Multipurpose food and confections" to avoid disclosing figures for individual companies.⁵"Cigarette machines and postage stamp machines" are included in "Water machines" to avoid disclosing figures for individual companies.

Table 21. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF COIN-OPERATED VENDING MACHINES: 1992 AND 1991**

[Value in millions of dollars]

Product description	Manufacturers' shipments (value f.o.b. plant)	Exports of domestic merchandise ¹	Imports for consumption ^{2 3}	Apparent consumption ⁴
1992				
Coin-operated vending machines	552.4	136.3	23.4	439.5
1991				
Coin-operated vending machines	522.1	129.6	18.2	410.7

¹Source: Bureau of the Census report EM 545, *U.S. Exports*. Schedule B export numbers for automatic merchandising machines, coin-operated, new are: 8476.11.0000 and 8476.19.0000.

²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*. HTSUSA numbers for automatic merchandising machines, coin-operated, new are: 8476.11.0000 and 8476.19.0000.

³This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus import duties.

⁴Apparent consumption is derived by subtracting exports from the total of manufacturers' shipments plus imports.

HISTORICAL NOTE

Data on coin-operated vending machines have been collected by the Bureau of the Census since 1955. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

FUNDING

The MA35U survey is funded by the National Automatic Merchandising Association.

CONTACT FOR DATA USERS

For additional information about these data, contact Joanna Nguyen, 301-763-7872 or Cynthia Ramsey, 301-763-5440.

9.8 MOTORS AND GENERATORS

INTRODUCTION

These data cover firms engaged in the manufacture of electric motors and generators and engine-driven generator sets in the United States. The statistics were collected by mail on Bureau of the Census annual Form MA36H, Motors and Generators. The survey panel includes all known manufacturers of these products, approximately 250 companies.

SUMMARY OF FINDINGS

During 1992, manufacturers' value of shipments of motors and generators, including interplant transfers, totaled \$7,787.5 million, a 2-percent increase above the 1991 shipments of \$7,652.4 million.

The 1992 data for individual categories of motors and generators exhibited the following changes: The dollar value of shipments of fractional horsepower motors increased 5

percent, from \$3,626.0 million in 1991 to \$3,816.3 million in 1992; integral horsepower motors and generators decreased 2 percent, to \$1,645.7 million in 1992, from \$1,670.7 in 1991. The dollar value of shipments of land transportation motors and generators decreased 32 percent, from \$202.7 million to \$138.4 million. There was a 1-percent decrease in the value of shipments of prime mover generator sets sold. In 1992, \$1,039.6 million were reported in this category, compared with the \$1,048.1 million reported in 1991. Electric motor generator sets and other rotating equipment, including hermetics and parts, decreased 4 percent to \$1,147.5 million in 1992, from \$1,105.0 million in 1991.

EXPLANATION OF TERMS

See the Introduction for an explanation of terms.

Table 22. **VALUE OF SHIPMENTS OF MOTORS AND GENERATORS, BY PRODUCT CLASS: 1983 TO 1992**

[Millions of dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
3621 —	Motors and generators	7,787.5	7,652.5	7,552.7	7,947.3	7,664.1	6,762.0	6,198.7	6,267.4	6,314.5	5,651.5
36211	Fractional horsepower motors, excluding hermetics	3,816.3	3,626.0	3,698.3	4,049.7	3,983.5	3,493.8	3,258.6	3,322.3	3,208.3	2,912.4
36212	Integral horsepower motors and generators, other than for land transportation equipment	1,645.7	1,670.7	1,568.3	1,573.5	1,477.0	1,249.7	1,191.5	1,201.2	1,209.3	1,134.5
36213	Land transportation motors, generators, and control equipment ¹	138.4	202.7	195.4	237.4	190.4	228.6	257.4	473.9	461.0	303.4
36214	Prime mover generator sets (except steam or hydraulic turbine)	1,039.6	1,048.1	991.9	998.0	956.2	779.4	789.5	699.8	789.3	731.0
	Motor generator sets and other rotating equipment:										
36217	Fractional	344.1	325.1	311.4	281.1	250.5	248.7	231.1	268.4	303.0	260.1
36218	Integral	422.2	393.3	359.0	342.7	318.7	282.2	275.4	301.8	343.6	310.1
36219 ¹	Parts for motors and generators	381.2	386.6	428.4	464.9	² 487.8	² 479.6	195.2	(NA)	(NA)	(NA)

(NA) Not available. ¹Revised by 5 percent or more from previously published figures.

¹Prior to 1986, data for product code 36219, "Parts for motors and generators," were collected only on a partial basis and included with product code 36213.

²Revised downward due to reporting errors.

Table 23. QUANTITY AND VALUE OF SHIPMENTS OF MOTORS AND GENERATORS: 1992 AND 1991

[Value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity ¹	Value	Quantity ¹	Value
3621	Motors and generators.....	(NA)	(X)	7,787,447	(X)	7,652,375
36211 —	Fractional horsepower, excluding hermetics and other rotating equipment.....	(NA)	308,097	3,816,255	292,072	3,626,021
36211 OM	Used in automobile accessories (such as heaters, convertible tops, and automatic windows; excluding starter motors and generators), including ac and dc.....	12	128,800	963,427	119,191	903,283
	Used in aircraft and spacecraft, excluding generators:					
36211 ON	ac.....	18	127	36,878	178	47,516
36211 OP	dc.....	19	366	75,308	393	85,759
36211 OR	Used in toys (all sizes, ac and dc) AND	1				
36211 OS	Used for clock-type and subsynch timing, ac and dc.....	8	18,187	70,465	18,458	72,274
	All other uses:					
	ac (non-commutated).....	(NA)	120,185	1,925,783	116,968	1,829,726
	Single phase or polyphase:					
36211 X2, 3	Less than 746 watts, under 1 hp (three-digit FS).....	2	² (D)	² (D)	² (D)	² (D)
	Single phase:					
	Skeleton type shaded pole.....	(NA)	26,970	110,875	23,559	94,964
36211 1A	Less than 2.75-inch diameter at widest point.....	9	7,447	39,095	7,702	37,982
36211 1B	2.75-inch diameter and over.....	5	19,523	71,780	15,857	56,982
	Conventional type shaded pole.....	(NA)	48,503	404,563	51,544	399,662
36211 1C	Less than 2.5-inch diameter.....	7	(D)	(D)	(D)	(D)
	2.5- to less than 3.75-inch diameter:					
36211 1D	2 pole.....	8	11,098	127,718	9,302	109,766
36211 1E	4 pole and over.....	7	12,466	109,490	12,067	107,429
36211 1F	3.75- to less than 4.375-inch diameter.....	4	3,042	35,970	2,718	34,092
	4.375- to less than 5.375-inch diameter:					
36211 1G	2 pole and 4 pole.....	6	1,963	29,772	2,095	33,052
36211 1H	6 pole and over.....	6	(D)	(D)	(D)	(D)
36211 1I	5.375-inch diameter and over.....	4	(D)	(D)	(D)	(D)
	Permanent split capacitor.....	(NA)	12,617	321,592	12,207	316,794
36211 1J	Less than 2.5-inch diameter.....	6	(D)	(D)	(D)	(D)
	2.5- to less than 3.75-inch diameter:					
36211 1K	2 pole.....	11	661	18,187	705	18,871
36211 1L	4 pole and over.....	9	1,424	25,925	990	18,622
	3.75- to less than 4.375-inch diameter:					
36211 1M	2 pole AND.....	2				
36211 1N	4 pole and over.....	8	939	18,243	653	15,190
	4.375- to less than 5.375-inch diameter:					
36211 1O	2 pole.....	3	(D)	(D)	(D)	(D)
36211 1P	4 pole.....	9	984	18,285	899	17,099
36211 1R	6 pole and over.....	8	544	16,171	834	22,173
	5.375- to less than 6-inch diameter:					
36211 1S	Less than 746 watts, under 1 hp (two-digit FS).....	10	³ 7,022	³ 211,138	³ 7,097	³ 212,684
36212 1A	746 watts and over, 1 hp and over (two-digit FS) (see product code 36212 X4).....	3	(⁴)	(⁴)	(⁴)	(⁴)
	6-inch diameter and over:					
36211 1U	Less than 746 watts, under 1 hp (two-digit FS).....	5	(³)	(³)	(³)	(³)
36212 1B	746 watts and over, 1 hp and over (two-digit FS) (see product code 36212 X4).....	4	(⁴)	(⁴)	(⁴)	(⁴)
	Capacitor start.....	(NA)	7,187	192,908	6,471	171,074
36211 12	Less than 2.5-inch diameter AND.....	4				
36211 13	2.5- to less than 3.75-inch diameter.....	7	6,125	125,468	5,416	111,839
36211 14	3.75- to less than 4.375-inch diameter.....	4	88	2,455	174	2,286
36211 15	4.375- to less than 5.375-inch diameter.....	6	303	12,552	390	16,541
	5.375- to less than 6-inch diameter:					
36211 16	Less than 746 watts, under 1 hp (two-digit FS).....	6	379	22,993	265	15,858
36212 1C	746 watts and over, 1 hp and over (two-digit FS) (see product code 36212 X4).....	5	(⁴)	(⁴)	(⁴)	(⁴)
	6-inch diameter and over:					
36211 18	Less than 746 watts, under 1 hp (two-digit FS).....	7	292	29,440	226	24,550
36212 1D	746 watts and over, 1 hp and over (two-digit FS) (see product code 36212 X4).....	7	(⁴)	(⁴)	(⁴)	(⁴)
	Split phase.....	(NA)	9,098	287,756	9,034	289,713
36211 32	Less than 2.5-inch diameter AND.....	1				
36211 33	2.5- to less than 3.75-inch diameter.....	4	20	1,884	17	1,855
36211 34	3.75- to less than 4.375-inch diameter AND.....	3				
36211 35	4.375- to less than 5.375-inch diameter.....	6	2,123	35,295	1,966	38,570

See footnotes at end of table.

Table 23. QUANTITY AND VALUE OF SHIPMENTS OF MOTORS AND GENERATORS: 1992 AND 1991—Continued

[Value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity ¹	Value	Quantity ¹	Value
3621 —	Motors and generators—Cont.					
36211 —	Fractional horsepower, excluding hermetics and other rotating equipment—Cont.					
	All other uses—Cont.					
	ac (non-communicated)—Cont.					
	Single phase or polyphase—Cont.					
	Single phase—Cont.					
	Split phase—Cont.					
	5.375- to less than 6-inch diameter:					
36211 36	Less than 746 watts, under 1 hp (two-digit FS)	9	(D)	(D)	(D)	(D)
36212 3E	746 watts and over, 1 hp and over (two-digit FS)					
	(see product code 36212 X4)	4	(⁴)	(⁴)	(⁴)	(⁴)
	6-inch diameter and over:					
36211 38	Less than 746 watts, under 1 hp (two-digit FS)	6	(D)	(D)	(D)	(D)
36212 3F	746 watts and over, 1 hp and over (two-digit FS)					
	(see product code 36212 X4)	2	(⁴)	(⁴)	(⁴)	(⁴)
	All other single phase	(NA)	13,954	435,396	12,371	384,228
36211 42	Less than 2.5-inch diameter	-	-	-	-	-
36211 43	2.5- to less than 3.75-inch diameter	1	(D)	(D)	(D)	(D)
36211 44	3.75- to less than 4.375-inch diameter	1	(D)	(D)	(D)	(D)
36211 45	4.375- to less than 5.375-inch diameter	3	(D)	(D)	(D)	(D)
	5.375- to less than 6-inch diameter:					
36211 46	Less than 746 watts, under 1 hp (two-digit FS)	5	(D)	(D)	(D)	(D)
36212 4G	746 watts and over, 1 hp and over (two-digit FS)					
	(see product code 36212 X4)	4	(⁴)	(⁴)	(⁴)	(⁴)
	6-inch diameter and over:					
36211 48	Less than 746 watts, under 1 hp (two-digit FS)	5	7,565	234,890	6,728	'208,576
36212 4H	746 watts and over, 1 hp and over (two-digit FS)					
	(see product code 36212 X4)	4	(⁴)	(⁴)	(⁴)	(⁴)
	Polyphase (servo and nonservo)	(NA)	1,826	151,430	1,693	145,389
	Synchronous stepper motors:					
	Less than 3-inch diameter AND	8				
36211 52	3- to less than 4-inch diameter AND	2				
36211 53	4- to less than 6-inch diameter AND	2				
36211 54	6-inch diameter and over	1	673	42,120	683	'50,235
	All other polyphase:					
	Servo (induction rotor):					
36211 5M	Less than 4.375-inch diameter AND	2				
36211 5N	4.375- to less than 5.375-inch diameter AND	2				
36211 5O	5.375-inch diameter and over	2	195	19,651	142	'15,015
	Non-servo:					
36211 5P	Less than 4.375-inch diameter AND	8				
36211 5R	4.375- to less than 5.375-inch diameter	7	274	26,766	290	'29,717
	5.375- to less than 6-inch diameter:					
36211 5T	Less than 736 watts, under 1 hp (two-digit FS)	10	277	25,279	247	22,758
36212 5I	746 watts and over, 1 hp and over (two-digit FS)					
	(see product code 36212 X5)	5	(⁴)	(⁴)	(⁴)	(⁴)
	6-inch diameter and over:					
36211 5V	Less than 746 watts, under 1 hp (two-digit FS)	8	407	37,614	331	27,664
36212 5J	746 watts and over, 1 hp and over (two-digit FS)					
	(see product code 36212 X5)	9	(⁴)	(⁴)	(⁴)	(⁴)
	dc or universal motors by case size	(NA)	40,432	744,394	36,884	687,463
36211 6C	Less than 4.0-inch diameter	47	40,037	570,475	36,516	'522,971
36211 6D	4.0-inch diameter and over	15	395	173,919	368	'164,492
	By commutation:					
	Mechanically commutated (i.e., brushes)	(NA)	27,887	412,483	25,590	386,371
	Cased or sleeved:					
36211 6E	Less than 2.875-inch diameter	17	6,235	61,203	'6,992	'65,989
36211 6F	2.875- to less than 3.188-inch diameter	13	1,437	31,364	1,237	25,455
36211 6G	3.188- to less than 3.563-inch diameter	12	114	6,381	116	6,665
	3.563-inch diameter and over:					
36211 6H	Less than 746 watts, under 1 hp (two-digit FS)	11	(D)	(D)	(D)	(D)
36212 6K	746 watts and over, 1 hp and over (two-digit FS)					
	(see product code 36212 X6)	4	(⁴)	(⁴)	(⁴)	(⁴)
	Uncased:					
36211 6J	Less than 2.875-inch diameter	8	6,265	50,501	5,403	'45,586
36211 6K	2.875- to less than 3.188-inch diameter AND	6				

See footnotes at end of table.

Table 23. QUANTITY AND VALUE OF SHIPMENTS OF MOTORS AND GENERATORS: 1992 AND 1991—Continued

[Value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity ¹	Value	Quantity ¹	Value
3621	Motors and generators—Cont.					
36211—	Fractional horsepower, except hermetics and other rotating equipment—Cont.					
	All other uses—Cont.					
	dc or universal motors by case size—Cont.					
	By commutation—Cont.					
	Mechanical commutated (i.e., brushes)—Cont.					
	Uncased—Cont.					
36211 6L	3.188- to less than 3.563-inch diameter AND	-				
36211 6M	3.563- to less than 4.375-inch diameter.....	4	10,480	182,939	7,932	'157,815
	4.375-inch diameter and over:					
36211 6N	Less than 746 watts, under 1 hp (two-digit FS)	2	(D)	(D)	(D)	(D)
36212 6L	746 watts and over, 1 hp and over (two-digit FS) (see product code 36212 X6)	1	(⁴)	(⁴)	(⁴)	(⁴)
	Permanent magnet (brushless)	(NA)	12,109	286,888	10,924	261,262
	Servo:					
36211 8F	Less than 2.0-inch diameter AND	8				
36211 8G	2.0- to less than 4.0-inch diameter	10	4,091	97,224	2,968	'91,177
36211 8H	4.0-inch diameter and over	4	13	8,177	16	10,026
	Non-servo:					
36211 8I	Less than 2.0-inch diameter AND	8				
36211 8J	2.0- to less than 4.0-inch diameter	22	7,299	135,813	6,865	'115,422
36211 8K	4.0-inch diameter and over	12	203	27,581	169	'23,232
	Wound field:					
36211 8L	Less than 2.0-inch diameter	-	-	-	-	-
36211 8M	2.0- to less than 4.0-inch diameter AND	10				
36211 8N	4.0-inch diameter and over	7	503	18,093	906	21,405
	Electronically commutated	(NA)	436	45,023	370	39,830
	Stepper:					
36211 91	Less than 3-inch diameter AND	7				
36211 92	3-inch diameter and over	5	392	30,133	326	'25,645
	All other:					
	Servo:					
36211 93	Less than 4.375-inch diameter AND	5				
36211 94	4.375- to less than 5.375-inch diameter	1	19	7,673	18	'6,333
36211 95	5.375-inch diameter and over	3	(D)	(D)	(D)	(D)
36211 96	Non-servo	4	(D)	(D)	(D)	(D)
36212 —	Integral horsepower, excluding hermetics and other rotating equipment..	(NA)	7,000,896	1,645,673	6,662,003	1,670,690
36212 04	Used in aircraft and spacecraft, excluding generators	4	7,619	28,651	10,905	38,597
	All other uses:					
	ac (non-commutated)	(NA)	4,031,090	1,350,237	3,766,887	1,357,728
	Motors	(NA)	2,078,740	170,138	1,731,275	161,276
	Single phase:					
36211 1W	Less than 746 watts, under 1 hp (three-digit FS) (see product code 36211 X2)	2	(²)	(²)	(²)	(²)
36212 12	746 watts and over, 1 hp and over (three-digit FS)	10	410,234	65,765	399,104	'70,065
36212 X4	746 watts and over, 1 hp and over (two-digit FS)	(NA)	1,668,506	104,373	1,332,171	91,211
	Polyphase induction, excluding synchronous	(NA)	1,852,242	918,634	1,955,887	940,583
	All motors, including energy efficient (EE)	(NA)	1,859,532	943,797	1,960,388	969,168
36211 1X	Less than 0.746 watts, less than 1 hp (three-digit FS) (see product code 36211 X3)	3	(²)	(²)	(²)	(²)
36212 X5	746 watts and over, 1 hp and over (two-digit FS)	(NA)	430,475	48,139	352,790	37,587
36212 15	0.746 to 3.371 kW, 1 through 5 hp	14	769,545	131,815	889,853	142,683
36212 16	3.731- to less than 14.921 kW, greater than 5 through 20 hp ..	18	437,791	146,062	491,711	153,909
36212 17	14.921 to less than 37.301 kW, greater than 20 through 50 hp	15	126,802	116,459	132,448	'117,037
36212 18	37.301 to less than 74.601 kW, greater than 50 through 100 hp	15	42,545	91,261	39,887	'91,647
36212 19	74.601 to less than 149.201 kW, greater than 100 through 200 hp	16	24,654	98,523	29,705	117,706
36212 20	149.601 to less than 373.001 kW, greater than 200 through 500 hp	17	15,953	161,662	15,153	158,983
36212 27	373.001 to less than 746.001 kW, greater than 500 through 1,000 hp	11	2,223	53,350	2,066	'49,145
36212 28	746.001 to less than 1,865.001 kW, greater than 1,000 through 2,500 hp	7	2,125	56,787	2,141	56,047
36212 29	1,865.001 kW and over, greater than 2,500 hp	4	129	14,576	133	15,839

See footnotes at end of table.

Table 23. QUANTITY AND VALUE OF SHIPMENTS OF MOTORS AND GENERATORS: 1992 AND 1991—Continued

[Value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity ¹	Value	Quantity ¹	Value
3621 —	Motors and generators—Cont.					
36212—	Integral horsepower, excluding hermetics and other rotating equipment—Cont.					
	All other uses—Cont.					
	ac (non-communicated)—Cont.					
	Energy efficient motors, included in product code 36212 15 to 36212 19 above.	(NA)	194,612	129,414	259,027	143,809
36212 2K	0.746 to 3.371 kW, 1 through 5 hp	6	89,331	21,088	63,979	'34,592
36212 2L	3.731 to less than 14.921 kW, greater than 5 through 20 hp	7	63,553	25,419	134,988	39,734
36212 2M	14.921 to less than 37.301 kW, greater than 20 through 50 hp	7	20,976	25,824	39,215	'25,562
36212 2N	37.301 to less than 74.601 kW, greater than 50 through 100 hp	7	12,816	26,104	12,624	21,275
36212 2P	74.601 to less than 149.201 kW, greater than 100 through 200 hp	8	7,936	30,979	8,221	22,646
	Synchronous (servo and non-servo)	(NA)	7,290	25,163	4,501	28,585
36212 31	Less than 149.201 kW, through 200 hp AND	4				
36212 32	149.201 kW and over, over 200 hp	3	7,290	25,163	4,501	'28,585
	ac generators (for internal combustion engines)	(NA)	85,528	211,139	70,723	198,699
36212 36	Less than 1.5 kVA AND	1				
36212 37	1.5 to less than 5 kVA	4	42,455	19,778	36,930	14,712
36212 38	5 to less than 15 kVA	9	12,200	15,459	4,835	'8,841
36212 39	15 to less than 40 kVA AND	6				
36212 41	40 to less than 75 kVA	6	13,744	48,197	12,827	46,618
36212 42	75 to less than 200 kVA AND	7				
36212 43	200 to less than 375 kVA	6	8,412	27,570	7,311	24,832
36212 44	375 to less than 750 kVA	7	5,364	32,022	4,699	'27,225
36212 45	750 to less than 1,250 kVA AND	4				
36212 46	1,250 to less than 2,500 kVA AND	4				
36212 47	2,500 to less than 10,000 kVA	4	3,353	68,113	4,121	'76,471
36212 48	10,000 kVA and over	-	-	-	-	-
	dc motors and generators, excluding all arc welding and battery charging generators for internal combustion engines	(NA)	2,962,187	266,785	2,884,211	274,365
	0.746 to less than 3.375 kW, 1 through 5 hp:					
36212 61	Permanent magnet AND	5				
36212 62	Wound field AND	7				
36212 63	Other, including universal and electric commutated	2	2,729,626	93,541	2,692,773	98,711
36212 X6	746 watts and over, 1 hp and over (two-digit FS)	(NA)	67,906	13,583	63,861	'14,469
36212 64	3.731 to less than 14.921 kW, greater than 5 through 20 hp AND	6				
36212 65	14.921 to less than 74.601 kW, greater than 20 through 100 hp	2	153,358	50,182	116,152	45,467
36212 66	74.601 to less than 149.201 kW, greater than 100 through 200 hp AND	3				
36212 67	149.201 kW to less than 373.001 kW, greater than 200 through 500 hp AND	1				
36212 68	373.001 kW and over, greater than 500 hp	3	11,297	109,479	11,425	'115,718
36213—	Motors and generators for land transportation, including those used in associated control equipment	(NA)	256,416	138,441	280,910	202,650
36213 01	Used for trolley cars, trolley coaches, rapid transit cars, trolley locomotives, third-rail locomotives, multiple unit cars for railway service, and mining locomotives AND	2				
36213 21	Used for gasoline-electric and diesel-electric buses, trucks, locomotives, and rail cars AND	4				
36213 41	All other types of land transportation	4	256,416	138,441	280,910	202,650
36214 —	Prime mover generator sets (except steam or hydraulic turbine and electric motor-driven generator sets)	(NA)	396,277	1,039,553	342,863	1,048,070
	Gas/gasoline engine-driven generator sets, ac and dc output	(NA)	357,860	291,747	298,813	259,008
36214 03	Under 1.5 kVA AND	7				
36214 04	1.5 to less than 5 kVA	19	253,101	130,077	240,899	'123,132
36214 05	5 to less than 15 kVA	19	90,600	87,131	48,304	66,083
36214 07	15 to less than 50 kVA	14	4,972	27,641	4,915	23,669
36214 08	50 to less than 100 kVA	12	8,633	19,701	4,164	'15,709
36214 10	100 to less than 500 kVA	12	488	10,922	445	'8,515
36214 12	500 to less than 1,000 kVA AND	3				
36214 13	1,000 kVA and over	2	66	16,275	86	'21,900
	Diesel engine-driven generator sets, ac and dc output	(NA)	38,417	747,806	44,050	789,062
36214 41	Under 15 kVA	18	10,737	39,730	16,224	'55,301
36214 42	15 to less than 50 kVA	21	5,254	36,748	5,861	40,087
36214 43	50 to less than 100 kVA	20	4,271	46,489	4,517	45,648

See footnotes at end of table.

Table 23. QUANTITY AND VALUE OF SHIPMENTS OF MOTORS AND GENERATORS: 1992 AND 1991—Continued

[Value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity ¹	Value	Quantity ¹	Value
3621 —	Motors and generators—Cont.					
36214 —	Prime mover generator sets (except steam or hydraulic turbine and electric motor-driven generator sets)—Cont.					
	Diesel engine-driven generator sets, ac and dc output—Cont.					
36214 44	100 to less than 200 kVA	22	5,619	78,824	4,699	'68,777
36214 45	200 to less than 400 kVA	23	6,393	138,580	6,217	'126,589
36214 46	400 to less than 600 kVA	14	2,054	73,644	2,167	'75,772
36214 47	600 to less than 800 kVA	15	1,088	59,861	1,272	'65,319
36214 48	800 to less than 1,000 kVA	12	959	68,594	1,021	'78,304
36214 49	1,000 to less than 2,000 kVA AND	13				
36214 50	2,000 to less than 3,000 kVA	4	1,538	182,530	1,465	191,779
36214 51	3,000 kVA and over AND	1				
	Dual fuel (oil and gas) engine-driven generator sets, ac and dc output:					
36214 52	Under 2,000 kVA AND	1				
36214 53	2,000 kVA and over	1	⁵ 504	⁵ 22,806	⁵ 607	⁵ '41,486
35111 90	Gas turbine-driven generator sets (all sizes)	7	(⁶)	(⁶)	(⁶)	(⁶)
36214 75	Other generator set units, excluding electric motor-driven generator sets	4	(⁵)	(⁵)	(⁵)	(⁵)
36217, 8, 9	Electric motor-driven generator sets, other rotating equipment and parts for motors and generators	(NA)	(X)	1,147,525	(X)	1,104,944
	Electric motor-driven generator sets, including dynamotors, converters, inverters, and frequency changers:					
36218 11	Synchro converters and double current generators, 746 watts or more	3	1,962	7,625	2,414	9,101
	Other motor generator sets:					
36217 21	ac and dc output rated at less than 746 watts	6	10,055	3,419	13,639	'4,736
	ac and dc output rated at 746 watts or more:					
	ac output, based on the rating of the largest ac generator:					
36218 32	746 watts to less than 150 kW AND	13				
36218 33	150 kW and over	5	4,404	23,110	10,248	'40,609
	dc output, based on the rating of the largest dc generator:					
36218 34	746 watts to less than 170 kW AND	3				
36218 36	170 kW and over	1	644	28,979	720	'29,634
	Other rotating equipment:					
36217 53	Rate generators, resolvers, and combinations (less than 746 watts) AND	9				
36217 57	Synchro-type components, less than 746 watts	4	215,232	86,172	234,924	92,028
	All hermetic motors:					
36217 97	5.5-inch stator core diameters, and smaller	7	⁷ 10,275	228,093	⁷ 8,939	'203,849
36218 97	Over 5.5-inch stator core diameter	9	⁷ 10,533	317,601	⁷ 8,645	'268,375
	All other rotating equipment:					
36217 98	Rated at less than 746 watts	8	(X)	26,428	(X)	'24,454
36218 98	Rated at 746 watts or more	8	(X)	44,883	(X)	'45,607
	Parts for motors and generators regardless of output rating	(NA)	(X)	381,215	(X)	'386,551
36219 90	Commutators	14	(X)	93,571	(X)	'100,067
36219 59	Land transportation	7	(X)	10,602	(X)	'10,629
36219 95	All other parts	52	(X)	277,042	(X)	275,855

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. FS = Frame size. (NA) Not available. 'Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹The unit of measure shown for "Fractional horsepower, excluding hermetics and other rotating equipment," is in thousands of units and "Integral horsepower, excluding hermetics and other rotating equipment," is in number of units.

²Data are included in product code 36211 X2, 3.

³Data for product code 36211 1U are included in product code 36211 1S.

⁴Data are included in product code 36212.

⁵Data for "Dual fuel generator sets (over 2,000 kW)" include figures for "Other generator set units."

⁶Figures for product code 35111 90 covering "Gas turbine-driven generator sets" are not included in any of the total figures to avoid disclosing the operations of individual companies.

⁷The unit of measure for these data is in number of units.

Table 24. **QUANTITY AND VALUE OF TOTAL SHIPMENTS AND INTERPLANT TRANSFERS OF MOTORS AND GENERATORS, AND QUANTITY OF MOTORS AND GENERATORS PRODUCED AND INCORPORATED INTO OTHER PRODUCTS AT THE SAME ESTABLISHMENT: 1992 AND 1991**

[Quantity in thousands of units; value in thousands of dollars]

Product code	Product description	Total shipments, including interplant transfers		Interplant transfers		Produced and incorporated (quantity)
		Quantity	Value	Quantity	Value	
1992						
3621 —	Motors and generators:					
36211 —	Fractional horsepower motors, excluding hermetics.....	308,097	3,816,255	64,622	806,153	11,719
36212 —	Integral horsepower motors and generators, excluding hermetics	7,001	1,645,673	4,009	66,464	1,177
	Alternating current:					
36212 00	Polyphase, induction greater than 1 hp.....	1,422	870,495	15	19,983	24
36212 XX	Other	5,579	775,178	3,994	46,481	1,153
36213 —	Motors and generators for land transportation equipment	256	138,441	(1)	(1)	(D)
36214 —	Prime mover generator sets (except steam and hydraulic turbine)1	396	1,039,553	17	7,453	(D)
36217 —	Electric motor generator sets and other rotating equipment, including hermetics, with power rating less than 746 watts.....	(X)	344,112	6,422	64,351	(D)
36218 —	Electric motor generator sets and other rotating equipment, including hermetics, with a power rating of 746 watts or more.....	(X)	422,198	(D)	(2)	(D)
36219 —	Parts for motors and generators2.....	(X)	381,215	(X)	75,152	(D)
1991						
3621 —	Motors and generators:					
36211 —	Fractional horsepower motors, excluding hermetics.....	292,072	3,626,021	63,321	779,696	10,231
36212 —	Integral horsepower motors and generators, excluding hermetics	6,662	1,670,690	2,490	58,228	1,185
	Alternating current:					
36212 00	Polyphase, induction greater than 1 hp.....	1,603	902,996	17	17,015	15
36212 XX	Other	5,059	767,694	2,473	41,213	1,170
36213 —	Motors and generators for land transportation equipment	281	202,650	(1)	(1)	(D)
36214 —	Prime mover generator sets (except steam and hydraulic turbine)1	343	1,048,070	27	10,272	(D)
36217 —	Electric motor generator sets and other rotating equipment, including hermetics, with power rating less than 746 watts.....	(X)	325,067	4,240	49,488	(D)
36218 —	Electric motor generator sets and other rotating equipment, including hermetics, with a power rating of 746 watts or more.....	(X)	393,326	(D)	(2)	(D)
36219 —	Parts for motors and generators2.....	(X)	386,551	(X)	67,480	(D)

(D) Data withheld to avoid disclosing figures for individual companies. (X) Not applicable.

¹Quantity and value of interplant transfers for product code 36213, "Motors and generators for land transportation equipment," are combined with product code 36214, "Prime mover generator sets (except steam and hydraulic turbine)."

²Value of interplant transfers for product code 36218, "Electric motor generator sets and other rotating equipment, including hermetics, with a power rating of 746 watts or more," are combined with product code 36219, "Parts for motors and generators."

Table 25. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF MOTORS AND GENERATORS: 1992 AND 1991**

[Quantity in thousands of units; value in \$1,000]

Product code	Product description	Manufacturers' shipments		Exports of domestic merchandise ¹ (value at port)	Imports for consumption ² (value)
		Quantity	Value f.o.b. plant		
	1992				
36211	Fractional horsepower motors and generators (except hermetics)	308,097	3,816,255	375,841	1,249,289
36212, 3	Integral horsepower motors and generators.....	7,257	1,784,114	485,451	498,195
36214	Prime mover generator sets (except steam or hydraulic and electric motor driven):				
	Gas/gasoline driven:				
	Less than 5 kVA (36214 03, 04).....	253	130,077	(³)	(³)
	5 kVA and over (36214 05 to 09).....	104	145,395	(³)	(³)
	Diesel engine-driven:				
	Less than 400 kVA (36214 41 to 45).....	32	340,371	(³)	(³)
	400 kVA to less than 1,000 kVA (36214 46 to 48)				
	1,000 kVA and over (36214 49 to 51).....	6	407,435	(³)	(³)
	Other (36214 to 75) ³	(X)	(X)	887,295	202,866
36217, 8, 9	Electric motor-driven generator sets, hermetics, other rotating equipment, and parts:				
	Synchronous converters, double current generators, and electric motor-driven generator sets (36217 21, 36218 11 to 36)	13	40,023	(⁴)	(⁴)
	Hermetic motors (36217 97, 36218 97).....	20,808	545,694	(⁴)	(⁴)
	Other rotating equipment (36217 53, 57, 98, 36218 98) ⁴	(X)	157,483	36,238	22,371
	Parts for all electric motors and generators (36219 59 to 95)	(X)	381,215	593,678	398,379
	1991				
36211	Fractional horsepower motors and generators (except hermetics)	292,072	3,626,021	302,763	966,801
36212, 3	Integral horsepower motors and generator.....	6,954	1,892,582	397,204	468,163
36214	Prime mover generator sets (except steam or hydraulic and electric motor driven):				
	Gas/gasoline driven:				
	Less than 5 kVA (36214 03, 04).....	241	123,132	(³)	(³)
	5 kVA and over (36214 05-09)	57	105,461	(³)	(³)
	Diesel engine-driven:				
	Less than 400 kVA (36214 41 to 45).....	38	336,402	(³)	(³)
	400 kVA to less than 1,000 kVA (36214 46 to 48)				
	1,000 kVA and over (36214 49 to 51).....	7	452,660	(³)	(³)
	Other (36214 to 75) ³	(X)	(X)	751,491	287,346
36217, 8, 9	Electric motor-driven generator sets, hermetics, other rotating equipment, and parts:				
	Synchronous converters, double current generators, and electric motor-driven generator sets (36217 21, 36218 11 to 36)	17	43,471	(⁴)	(⁴)
	Hermetic motors (36217 97, 36218 97).....	17,584	472,224	(⁴)	(⁴)
	Other rotating equipment (36217 53, 57, 98, 36218 98) ⁴	(X)	162,089	27,298	23,264
	Parts for all electric motors and generators (36219 59 to 95)	(X)	386,551	537,288	382,000

Note: Beginning in 1989, data for exports and imports are classified under a new harmonized system for better comparability.

(X) Not applicable.

¹Source: Bureau of the Census report EM 545, *U.S. Exports*.²Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.³Exports and imports data for "Gas/gasoline driven" and "Diesel engine-driven" are combined with "Other prime mover generator sets."⁴Exports and imports data for "Synchronous converters, double current generators, and electric motor-driven generator sets" and "Hermetic motors" are combined with "Other rotating equipment."

HISTORICAL NOTE

Data on motors and generators have been collected by the Bureau of the Census since 1960. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also

available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Robert Wright, 301-763-5573.



Chapter 10. HEAVY MACHINERY

10.1 FARM MACHINERY AND LAWN AND GARDEN EQUIPMENT

INTRODUCTION

These data cover firms engaged in the manufacture of farm machinery and lawn and garden equipment. Very small firms (generally less than five employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies are excluded.

The statistics were collected by mail on Bureau of the Census annual Form MA35A, Farm Machinery and Lawn and Garden Equipment. The survey panel includes all known producers of these products, except the very small firms excluded from the scope of the survey. Approximately 1,200 companies are included. No estimate is derived for the small firms excluded from the survey.

SUMMARY OF FINDINGS

During 1992, factory shipments of farm machinery and equipment, including parts and attachments, produced by original equipment manufacturers (OEM), totaled \$7,079.9 million, a decrease of 8.8 percent from 1991 shipments of \$7,705.5 million. Shipments of planting, seeding, and fertilizing machinery and parts totaled \$633.3 million, a 5-percent increase over the 1991 total of \$601 million. Harrow, rollers, pulverizers and stalk cutters shipments were valued at \$264.1 million, an 18-percent decrease from the 1991 value of \$321.6. Shipments of plows and listers decreased 9 percent, from \$119.6 million in 1991 to \$109.2 million in 1992. The value of shipments for harvesting machinery decreased 15 percent, from \$2,158 in 1991 to \$1,837.1 in 1992. Haying machinery decreased 16 percent, from \$659.1 million in 1991 to \$552.5 million in 1992. Shipments of farm dairy machines, sprayers and dusters, and farm elevators and farm blowers showed no significant change, at \$451.4 million in 1992.

The value of shipments for commercial turf and ground equipment, including parts, was \$742.2 million in 1992, a 2.4-percent increase over the \$724.8 million reported for 1991. The 1992 total included commercial turf and grounds mowing equipment, \$571.1 million, relatively unchanged from 1992; and other commercial turf and grounds care equipment, at \$171.1 million, an increase of 8 percent from the 1991 figure of \$158.4 million.

The value of shipments of consumer lawn, garden, and snow equipment, including parts, was \$4,135.9 million in 1992, a 4-percent increase over the \$3,972.9 million in 1991. The 1992 value of consumer nonriding lawn, garden and snow equipment and parts increased 6 percent to \$1,887.4 million from \$1,780.4 million in 1991. The value of consumer riding lawn, garden, and snow equipment and parts increased 3 percent, from \$1,618.4 million in 1991 to \$1,671.3 million in 1992.

EXPLANATION OF TERMS

Net Engine Horsepower. Net engine horsepower (nehp) is defined as net fly wheel performance as measured by the manufacturer, with all standard accessories operated, and corrected to 29.38 inches Hg and temperature of 85°.

Lawn Tractors and Riding Mowers. A self-propelled riding vehicle, generally designed for cutting grass, which is not capable of pulling a plow.

Garden Tractors. A self-propelled riding vehicle designed for general-purpose lawn and garden work. This vehicle is capable of pulling a plow. All attachments for garden tractors are removable.

Turf Tractors. A self-propelled riding vehicle, typified by a low center of gravity, equipped with wide turf-tread tires.

Parts for Farm Machinery and Equipment. Parts are manufactured components essential to the completeness and proper operation of a machine, vehicle, or apparatus. Parts data include only parts sold for replacement and repair. Parts sold to manufacturers for incorporation in their own products are excluded.

Attachments for Farm Machinery and Equipment. Attachments are supplementary devices designed to be attached to a vehicle or apparatus. These supplementary devices either (1) vary or extend the function of the unit or (2) add to the convenience or effectiveness of the basic unit.

Table 1. VALUE OF SHIPMENTS OF FARM MACHINERY AND LAWN AND GARDEN EQUIPMENT, BY TYPE OF EQUIPMENT: 1983 TO 1992

Product description ¹	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
Wheel tractors, farm type.	(²)	(²)	(²)	(²)	(²)	958.6	893.4	1,443.2	2,045.3	1,720.7
Farm dairy machines, sprayers, dusters, elevators, and farm blowers	451.4	449.2	516.0	478.2	434.8	364.7	371.7	403.6	428.2	417.2
Planting, seeding, and fertilizing machinery	633.3	601.0	676.2	638.2	508.6	409.1	371.2	453.3	601.1	447.5
Harvesting machinery	1,837.1	2,158.0	2,302.5	1,858.8	1,422.8	1,282.3	1,230.1	1,190.8	1,424.6	1,478.8
Haying machinery	552.5	659.1	875.1	731.1	574.6	433.7	383.4	498.1	611.6	541.9
Plows and listers	109.2	119.6	136.0	130.8	117.7	74.6	75.3	111.0	152.5	129.7
Harrows, rollers, pulverizers, and similar equipment.	264.1	321.6	212.4	207.8	136.9	99.9	99.2	166.0	369.7	341.0
All other farm machinery and equipment ^{2 3}	3,232.3	3,397.2	4,091.1	3,586.6	3,002.8	1,186.5	933.1	1,051.9	1,204.3	1,135.9
Commercial turf and grounds care equipment	742.2	724.8	707.9	633.9	595.0	514.6	412.8	376.7	333.8	263.2
Lawn and garden equipment.	4,135.9	3,972.9	4,101.8	3,708.5	3,937.0	3,979.9	3,385.8	3,155.1	2,978.1	2,475.4

¹Each type of farm machinery includes parts and attachments.

²Data for "Wheel tractors, farm-type" are included with "All other farm machinery and equipment" for years 1988 through 1992 to avoid disclosing data for individual companies.

³Includes irrigation systems.

Table 2. MANUFACTURER'S SHIPMENTS OF FARM MACHINERY AND LAWN AND GARDEN EQUIPMENT BY TYPE: 1992 AND 1991

[Quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35231 —	Wheel tractors (except contractors' off-highway wheel tractors, garden tractors, turf tractors, and motor tillers) and attachments	16	(X)	(¹)	(X)	(¹)
	Wheel tractors, farm type (power take-off hp)	(NA)	(D)	(D)	(D)	(D)
	2-wheel drive, including front wheel assist types	6	(D)	(D)	(D)	(D)
35231 10	Under 100 PTO hp (under 74 PTO kW)	4	(D)	(D)	(D)	(D)
35231 12	100-159 PTO hp (75-119 PTO kW)	3	(D)	(D)	(D)	(D)
35231 14	160 PTO hp and over (120 PTO kW and over)	3	(D)	(D)	(D)	(D)
35231 30	4-wheel drive, including tractors with equal size tires, front and rear	5	(D)	(D)	(D)	(D)
35231 87	Attachments for wheel tractors, farm type	8	(X)	5,955	(X)	5,611
35239 26	Parts for wheel tractors, farm type	13	(X)	197,607	(X)	207,595
35232 —	Farm dairy machines, sprayers, dusters, elevators, and farm blowers	(NA)	(X)	356,232	(X)	359,791
35232 pt.	Farm dairy machines and equipment	16	(X)	73,263	(X)	67,317
	Mechanical installations:					
35232 03	Vacuum pumping outfits for milking machines with or without motors and/or reserve tanks	6	(D)	(D)	(D)	(D)
35232 04	Milking machines, complete, suspended and floor-type bucket, single and double units	3	308	^b 32	310	^a 48
35232 08	Pipeline milking units, complete, including claws, shells, inflations, air tubes, with or without pulsator	7	30,906	^a 16,871	25,618	14,721
35232 11	Cream separators	-	-	-	-	-
35232 12	Other farm dairy machines and equipment	10	^a 16,966	14,841	^a 17,055	¹ 12,635
35232 16	Attachments for farm dairy machines and equipment	7	(X)	(D)	(X)	(D)
35239 30	Parts for farm dairy machines and equipment, replacement units only	9	(X)	22,679	(X)	20,382
35232 pt.	Sprayers and dusters	81	(X)	^a 240,241	(X)	^a 240,970
	Power sprayers, field and row crop types only:					
35232 19	Self-propelled	12	^a 1,955	^b 96,509	^a 2,099	^b 98,982
35232 30	Tractor mounted	30	8,505	^a 11,168	9,249	^a 12,012
	Other than tractor mounted:					
	Piston pump type:					
35232 40	Power take-off driven	11	^a 667	^a 3,484	^a 439	^a 1,972
35232 44	Engine-driven	4	(D)	(D)	(D)	(D)
35232 45	Nonpiston pump type	14	^a 2,251	^a 7,000	^a 1,917	^b 4,893
35232 46	Other power sprayers, over 4 g.p.m.	6	(D)	(D)	(D)	(D)
	Power sprayers, other than row crop and field types, over 4 g.p.m.:					
35232 47	Power take-off driven	13	2,559	5,675	¹ 2,447	¹ 5,455
35232 49	Engine-driven	17	2,778	5,279	¹ 2,593	¹ 5,814
35235 50	Air carried type power sprayers (field, row crop, and orchard types)	7	^a 914	^a 4,066	^a 1,955	^a 7,806
35235 51	Foggers and mist sprayers portable	8	^b 20,313	^b 7,235	^b 26,354	^b 10,251
35232 58	Hand pulled and garden-type 4 g.p.m. and under	16	29,509	5,510	¹ 28,146	¹ 5,644
	Sprayers, agricultural hand:					
35232 59	Under 1 gallon	4	520,606	3,040	521,704	2,766
	1 gallon and over:					
35232 61	Compressed air or gas	5	4,587,879	66,312	4,166,804	60,709
35232 62	Other, including knapsack, hose end, and flame sprayers; and sprayer pumps	8	4,038,320	6,438	3,797,065	¹ 5,558
35232 67	Dusters, power, hand, and all types	6	80,934	^b 797	95,281	^a 971
35232 68	All other sprayers	9	(X)	2,705	(X)	¹ 2,747
35232 69	Attachments for sprayers and dusters	20	(X)	8,547	(X)	6,878
35239 35	Parts for sprayers and dusters, replacement units only	44	(X)	63,641	(X)	58,688
35232 pt.	Farm elevators and blowers	48	(X)	42,728	(X)	51,504
	Farm elevators, portable:					
35232 70	Single and double chain	15	^a 2,133	5,002	^a 2,954	4,718
35232 72	Auger type	15	13,576	15,308	15,722	20,675
35232 73	Other farm portable and stationary augers and elevators	17	6,633	14,744	6,687	14,570

See footnotes at end of table.

Table 2. MANUFACTURER'S SHIPMENTS OF FARM MACHINERY AND LAWN AND GARDEN EQUIPMENT BY TYPE: 1992 AND 1991—Continued

[Quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35232 —	Farm dairy machines, sprayers, dusters, elevators, and farm blowers—Cont.					
	Farm elevators and blowers—Cont.					
35232 74	Other farm blowers, including forage blowers, and combination grain and forage blowers.	9	1,461	4,736	2,668	7,722
35232 75	Attachments for farm elevators and blowers.	11	(X)	2,938	(X)	3,819
35239 40	Parts for farm elevators and for grain and forage blowers, replacement units only.	24	(X)	8,877	(X)	10,108
35233 —	Planting, seeding, and fertilizing machinery.	137	(X)	513,883	(X)	494,000
	Corn planters, corn and cotton planters, and lister planters:					
35233 20	Pull-type.	7	(²)	(²)	(²)	(²)
35233 22	Mounted planters (total rows mounted) ²	5	36,470	112,714	45,129	132,954
35233 24	Grain drills (fixed frame), all types.	9	9,183	126,373	10,473	106,712
35233 40	Transplanters (pull-type or mounted) and broadcast seeders (end-gate, mounted and drawn).	10	42,486	9,455	40,774	7,934
	Fertilizer distributors (pull-type or mounted):					
35233 50	Dry (including lime spreaders).	31	^a 5,435	26,491	5,586	26,878
35233 58	Liquid.	10	(³)	(³)	(³)	(³)
35233 59	Anhydrous ammonia ³	7	6,795	19,145	3,812	13,622
35233 61	Manure spreaders, rear discharge.	17	^a 7,565	38,459	6,613	31,349
35233 65	Manure spreaders, side discharge.	9	2,382	18,347	2,949	19,089
35233 69	Manure pumps, liquid.	11	^a 996	^b 3,910	^a 898	^b 3,315
35233 73	Front and rear tractor mounted loaders (farm type), manure and general utility (except beet and sugar cane loaders).	15	18,382	49,231	15,547	38,575
35233 77	Row crop unit planters (quantity in rows).	8	^a 22,267	^b 13,164	^a 24,903	^b 15,511
35233 79	Other planting, seeding, and fertilizing machinery.	31	369,691	59,424	366,837	60,189
35233 84	Attachments for planting, seeding, and fertilizing machinery.	30	(X)	37,170	(X)	37,872
35239 71	Parts for planting, seeding, and fertilizing machinery, replacement units only.	74	(X)	119,369	(X)	106,985
35235 —	Harvesting machinery.	81	(X)	1,528,264	(X)	1,834,042
35235 11	Combines (harvester-threshers), grain-types only (self-propelled and pull type).	8	9,198	888,257	11,555	1,064,358
35235 21	Small grain header for combines, all sizes.	5	9,388	88,237	11,701	111,583
35235 31	Corn heads, all sizes.	6	3,626	63,066	5,268	87,658
35235 41	Other grain-type combines.	9	^b 1,439	^a 27,952	^b 1,865	^a 31,267
	Field forage harvesters:					
35235 63	Shear bar, self-propelled type and pull-type (basic machines).	5	1,716	47,301	3,192	93,114
	Attachments for shear bar type forage harvester:					
35235 64	Pickup hay unit and cutter bar hay unit.	6	(X)	(D)	(X)	4,128
35235 65	Row crop unit, all sizes.	5	(X)	(D)	(X)	(D)
35235 70	Flail-type (horizontal knives or vertical free-swinging knives or hammers), including discharge spouts.	5	538	2,741	612	3,352
35235 78	Cotton strippers and pickers (all types).	3	(D)	(D)	(D)	(D)
35235 79	Other harvesting machinery, including potato diggers, cane harvesting equipment, and picker-shellers.	43	2,557	91,705	5,905	109,000
35235 83	Attachments for harvesting machinery (including platform and seeder, reel, straw spreaders, load levelers, weed stripper, grate unit, knife grinders, and stalk walkers).	27	(X)	63,169	(X)	69,771
35239 50	Parts for harvesting machinery, replacement units only.	47	(X)	308,865	(X)	323,909
35236 —	Haying machinery.	39	(X)	435,154	(X)	535,455
35236 13	Mowers, cutter bar type, including drum and disk.	6	5,219	16,198	5,708	17,530
35236 23	Mower-conditioners and windrowers with conditioner auger and draper-type (pull-type and self-propelled).	7	9,623	106,967	15,468	166,046
35236 31	Rakes, side delivery, cylinder type, and finger wheel type.	11	7,288	22,316	8,738	27,326
35236 55	Hay balers, hay stackers (field type), hay bale loaders, and bale throwing attachments.	14	20,568	260,902	25,336	293,502
36236 82	Other haying machinery ⁴	18	23,907	28,771	24,205	31,051

See footnotes at end of table.

Table 2. MANUFACTURER'S SHIPMENTS OF FARM MACHINERY AND LAWN AND GARDEN EQUIPMENT BY TYPE: 1992 AND 1991—Continued

[Quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35236 —	Haying machinery—Cont.					
35236 83	Other attachments for haying machinery (stripper, bale chute, and attachments)	9	(X)	(*)	(X)	(*)
35239 55	Parts for haying machinery, replacement units only	23	(X)	117,385	(X)	123,661
3523C —	Plows, harrows, rollers, pulverizers, cultivators, and weeder	(NA)	(X)	276,002	(X)	349,996
3523C pt.	Plows (primary tillage equipment)	70	(X)	79,920	(X)	93,599
3523C 02	Moldboard plows (pull, mounted, semimounted, 1-way, and 2-way)	6	(D)	(D)	(D)	(D)
3523C 15	Subsoilers, deep tillage	24	1,995	10,199	1,999	8,787
3523C 17	Terracing and ditching plows	9	354	643	279	430
	Chisel plows, deep tillage (chisel or sweep type):					
3523C 19	Pull-type	13	927	11,266	1,326	12,410
3523C 21	Mounted	11	(D)	(D)	(D)	(D)
3523C 23	Disc-chisel combination	7	(5)	(5)	(5)	(5)
3523C 25	Other plows, except snow plows ⁵	6	1,898	19,140	3,021	30,470
3523C 27	Middlebusters and disc bedders	11	2,138	2,659	2,114	2,235
3523C 29	Attachments for plows (coulters, jointers, root cutters, subsoilers, fertilizer distributors, etc.), excluding lister planting attachments.	24	(X)	10,858	(X)	10,150
3523C 31	Plowshares (quantity in thousands of pounds)	9	7,568,534	8,949	7,126,187	9,015
35239 60	Parts for plows, except plowshares, replacement units only	23	(X)	29,256	(X)	25,988
3523C pt.	Harrows, rollers, pulverizers, and similar equipment (secondary tillage)	93	(X)	106,464	(X)	134,456
3523C 41	Spike-tooth harrow sections and spring-tooth and tine-tooth harrow sections	25	^b 19,386	^a 7,509	^b 20,435	^a 7,188
3523C 43	Power harrows	-	-	-	-	-
3523C 44	Disc harrows, single, tandem, and offset	22	9,981	32,902	11,367	56,381
3523C 53	Combination tillage equipment, roller/harrows, disc or coulters/field cultivators, disc or coulters/spring tooth	30	5,391	30,201	6,322	41,485
3523C 54	Blade terracers or scrapers (farm-size)	34	28,496	10,413	25,811	9,371
3523C 59	Land levelers	8	1,213	990	1,087	1,400
3523C 61	Other harrows, rollers, pulverizers, and similar equipment	25	5,015	19,853	4,919	14,013
3523C 63	Attachments for harrows, rollers, pulverizers, and similar equipment	15	(X)	^b 4,596	(X)	^b 4,618
35239 45	Parts for harrows, rollers, pulverizers, and similar equipment, replacement units only	39	(X)	20,932	(X)	21,997
3523C pt.	Cultivators and weeder	65	(X)	89,618	(X)	121,943
3523C 70	Corn and cotton type cultivators, shank and sweep type (front and rear mounted)	23	9,166	35,435	10,580	41,644
3523C 80	Rotary cultivators, ground and power driven	9	2,412	6,962	^c 3,502	12,339
3523C 90	Field cultivators	15	2,771	23,343	3,829	31,957
3523C 94	Other cultivators and weeder, including tool bars (basic units)	22	5,688	4,081	^c 5,736	5,330
3523C 98	Attachments for cultivators and weeder (front mounting frame, disc weeder, rear section, and drawbars)	28	(X)	19,797	(X)	^c 30,673
35239 65	Parts for cultivators and weeder, replacement units only	37	(X)	47,067	(X)	43,154
3523E —	All other farm machinery and equipment (except parts) . .	(NA)	(X)	2,822,007	(X)	2,949,701
3523E pt.	Stalk shredders and cutters or rotary mowers (PTO)	42	116,848	145,802	100,902	132,709
3523E 01	Flail type (without spout)	16	2,735	12,098	3,335	13,798
	Horizontal blade type:					
3523E 05	66 inches cutting width and under	26	73,940	37,241	^c 62,134	^c 31,900
3523E 07	Over 66 inches up to 100 inches cutting width	18	28,620	33,684	25,177	^c 29,205
3523E 09	Over 100 inches cutting width	13	11,553	62,779	10,256	^c 57,806
35239 85	Parts for stalk shredders, and cutters or rotary mowers (PTO), replacement units only	26	(X)	34,515	(X)	^c 33,516
3523E pt.	Machines for preparing crops for market or for use	99	(X)	197,463	(X)	180,630
3523E 11	Feed grinders and crushers, power	17	2,432	24,103	2,000	15,386

See footnotes at end of table.

Table 2. MANUFACTURER'S SHIPMENTS OF FARM MACHINERY AND LAWN AND GARDEN EQUIPMENT BY TYPE: 1992 AND 1991—Continued

[Quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3523E —	All other farm machinery and equipment (except parts)—Cont.					
	Machines for preparing crops for market or for use—Cont.					
3523E 13	Feed mixers, farm-size, stationary and portable	23	4,002	45,176	3,673	37,259
3523E 14	Combination grinder-mixers	9	1,991	16,634	2,589	21,882
	Dryers (grain, hay, and seed):					
3523E 25	Heated air crop dryers	18	7,537	36,914	5,165	26,217
3525E 26	Crop drying fans (over 15,000 c.f.m. at approximately 1-inch pressure)	11	7,492	4,259	5,036	2,705
3523E 23	Other machines for preparing crops for market or for use	45	47,483	61,668	42,244	69,820
3523E 24	Attachments for machines for preparing crops for market or for use	16	(X)	8,709	(X)	7,562
35239 70	Parts for machines for preparing crops for market or for use, replacement units only	48	(X)	25,229	(X)	23,893
3523E pt.	Farm poultry equipment	45	(X)	181,886	(X)	171,804
3523E 31	Incubators; quantity represents egg capacity in thousands	7	(D)	(D)	(D)	21,008
3523E 33	Brooders, floor and hanging (gas, electric, oil, coal, and wood) ⁶	9	82,832	12,495	80,230	10,781
3523E 35	Brooders, battery (starting and growing), quantity in number of decks	2	(⁶)	(⁶)	(⁶)	(⁶)
3523E 36	Nests and cages	6	(D)	(D)	(D)	(D)
3523E 39	Poultry feeders (except turkey feeders) (trough, hanging, and mechanical)	11	(⁷)	(⁷)	(⁷)	(⁷)
3523E 43	Poultry waterers (except turkey waterers) ⁷	13	13,290,043	68,712	11,428,465	58,964
3523E 48	Other farm poultry equipment, including turkey waterers, mechanized egg graders, and egg washers	23	4,013,203	^a 41,946	4,675,772	^a 44,639
3523E 49	Attachments for farm poultry equipment	13	(X)	11,032	(X)	15,254
35239 75	Parts for farm poultry equipment, replacement units only	17	(X)	^a 19,211	(X)	^a 21,576
3523E pt.	Hog equipment	47	(X)	86,018	(X)	76,150
3523E 50	Feeding equipment	27	223,741	27,190	271,915	30,402
3523E 55	Handling equipment	17	722,202	30,742	700,024	16,668
3523E 59	Watering equipment	23	915,320	9,271	837,738	11,719
3523E 61	Other hog equipment	27	355,767	17,011	367,777	15,079
3523E 62	Attachments for hog equipment	11	(X)	1,804	(X)	2,282
35239 88	Parts for hog equipment, replacement units only	19	(X)	6,378	(X)	6,392
3523E pt.	Other barn and barnyard equipment	100	(X)	178,317	(X)	^f 167,587
3523E 63	Silo and grain bin unloaders, forage and grain, including sealed storage unloaders (farm-type)	18	33,768	29,515	^f 31,294	28,798
	Cattle and dairy barn equipment:					
3523E 64	Feeding equipment	40	172,646	30,511	156,524	^f 27,649
3523E 71	Handling equipment	32	1,021,011	39,629	^f 829,911	^f 33,414
3523E 79	Water equipment	36	469,043	21,670	432,501	21,727
3523E 85	Other barn and barnyard equipment	52	860,891	52,446	910,430	51,946
3523E 86	Attachments for barn and barnyard equipment	18	(X)	4,546	(X)	4,053
35239 80	Parts for barn and barnyard equipment, replacement units only	32	(X)	^b 31,767	(X)	^b ^f 33,003
3523E pt.	Farm wagons, and other farm transportation equipment ¹	93	(X)	1,762,171	(X)	1,946,103
3523E 88	Wagons (chassis only) and trailer gears, excluding motor trucks, 4-wheel	36	(D)	(D)	(D)	(D)
	Boxes and racks for mounting on wagons and trailer gears:					
3523E 90	Manual unloading or dump	10	(D)	(D)	(D)	(D)
3523E 91	Gravity unloading, grain-type only	14	(D)	(D)	(D)	(D)
3523E 92	Power unloading	27	(D)	(D)	(D)	(D)
3523E 94	Boxes with integral running gear, grain- and forage-type	12	(D)	(D)	(D)	(D)
3523E 95	Other farm transportation equipment	30	(D)	(D)	(D)	(D)
3523E 96	Attachments for farm transportation equipment	17	(X)	7,921	(X)	6,473
35239 84	Parts for farm transportation equipment, replacement units only ^a	38	(X)	21,017	(X)	47,835
3523E pt.	Irrigation systems	24	(X)	270,350	(X)	^a 274,518
3523E 98	Self-propelled irrigation systems, center-pivot, quantity is in ten-tower equivalents	10	8,281	239,260	8,276	232,557

See footnotes at end of table.

Table 2. MANUFACTURER'S SHIPMENTS OF FARM MACHINERY AND LAWN AND GARDEN EQUIPMENT BY TYPE: 1992 AND 1991—Continued

[Quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3523E —	All other farm machinery and equipment (except parts)—Cont.					
	Irrigation systems—Cont.					
3523E 99	All other systems using 100-foot flexible hose feeder line and over	12	4,488	31,090	5,552	41,961
35239 82	Parts for irrigation systems, replacement units only	10	(X)	74,544	(X)	73,698
	Operator cabs	(NA)	(X)	(^b)	(X)	(^c)
	Operator cabs (metal) for farm equipment, shipped separately:					
35239 90	Farm tractors	5	(^b)	(^b)	(^c)	(^c)
35239 95	All other, including windrowers, combines, and power sprayers	-	-	-	-	-
3523F —	Commercial turf and grounds care equipment, including parts and attachments	(NA)	(X)	742,193	(X)	724,822
3523F pt.	Commercial turf and grounds mowing equipment	40	(X)	571,109	(X)	566,381
3523F 01	Powered nonriding mowers	15	47,116	59,444	49,259	68,574
3523F 03	Riding reel-type turf mowers, except greens mowers	7	16,314	135,052	15,837	128,461
3523F 07	Riding rotary turf mowers	19	25,364	156,079	27,647	160,159
3523F 09	Gang rotary cutting units, reel and rotary, individual sections	9	37,247	42,465	41,140	45,233
3523F 11	Flail mower cutting units, including gang	6	^b 2,668	^b 10,184	2,694	^c 9,691
3523F 13	Other mowing equipment	7	12,774	27,732	12,703	^c 20,259
3523F 17	Parts for commercial turf and grounds mowing equipment	28	(X)	^a 101,589	(X)	94,697
3523F 19	Attachments for commercial turf and grounds mowing equipment	19	(X)	^b 38,564	(X)	39,307
3523F pt.	Other commercial turf and grounds care equipment	42	(X)	171,084	(X)	158,441
3523F 21	Turf tractors	2	(^b)	(^b)	(^c)	(^c)
3523F 23	Sod cutters and sod harvesters ⁹	3	828,891	36,551	719,623	32,422
3523F 25	Seeders, spreaders, and top dresser attachments	9	(^b)	(^b)	(^c)	(^c)
3523F 27	Aerators, spikers, and pluggers	12	11,435	35,850	10,757	35,687
3523F 29	Dethatcher	11	6,910	5,709	4,940	4,095
3523F 31	Power brooms, blowers, vacuums, and sweepers	12	6,912	9,585	9,096	12,705
3523F 33	Irrigation systems (except agricultural and residential)	4	(^b)	(^b)	(^c)	(^c)
3523F 35	Turf trucks	5	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
3523F 37	Other commercial turf and grounds care equipment ¹⁰	17	9,952	49,379	9,936	44,477
3523F 41	Parts for other commercial turf and ground care equipment	21	(X)	25,406	(X)	22,720
3523F 43	Attachments for other commercial turf and ground care equipment	13	(X)	8,604	(X)	6,335
3524 —	Lawn and garden equipment	(NA)	(X)	4,135,930	(X)	3,972,924
35241 —	Consumer nonriding lawn, garden, and snow equipment	55	17,788,523	1,887,396	^c 16,305,583	^c 1,780,408
	Lawnmowers:					
35241 01	Reel, push-type	3	(¹¹)	(¹¹)	(¹¹)	(¹¹)
35241 11	Rotary, push-type, gas-powered ¹¹	22	4,465,384	^a 665,616	4,374,856	^a 633,723
35241 12	Rotary, self-propelled, gas-powered	21	(¹²)	(¹²)	(¹²)	(¹²)
35241 15	Electric, all types, including battery-powered ¹²	3	1,133,986	286,610	1,256,552	324,691
35241 20	Rotary garden motor tillers	13	(¹³)	(¹³)	(¹³)	(¹³)
35241 30	2-wheel tractors walking type (except rotary tillers) ¹³	3	406,613	160,989	379,908	158,352
	Snow throwers (snow blowers) (except attachment-type):					
35241 41	Single stage	7	151,098	44,971	129,020	37,872
35241 42	Dual stage	9	102,652	50,593	80,364	^c 43,027
	Powered lawn edgers/trimmers:					
35241 50	Fixed blade	16	841,349	55,218	^c 678,187	^c 36,706
	Other than fixed blades:					
35241 54	Gasoline engine	10	(¹⁴)	(¹⁴)	(¹⁴)	(¹⁴)
35241 55	Other, including electric ¹⁴	5	6,443,104	353,695	^c 6,138,832	^c 304,090
35241 61	Shredders and shredder-grinders	8	185,657	66,128	^c 146,120	^c 73,290
35241 63	Yard vacuums and blowers	16	1,497,107	98,578	^c 1,444,412	^c 89,685
35241 64	Lawn sweepers, push-type and powered (except attachment-type)	3	(¹⁵)	(¹⁵)	(¹⁵)	(¹⁵)

See footnotes at end of table.

Table 2. **MANUFACTURER'S SHIPMENTS OF FARM MACHINERY AND LAWN AND GARDEN EQUIPMENT BY TYPE: 1992 AND 1991—Continued**

[Quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3524 —	Lawn and garden equipment—Cont.					
35241 —	Consumer nonriding lawn, garden, and snow equipment—Cont.					
35241 91	Other consumer nonriding lawn, garden, and snow equipment ¹⁵	14	2,561,573	^b 104,998	1,677,232	79,030
35244 —	Consumer riding lawn, garden, and snow equipment	24	1,404,086	1,671,300	1,315,947	1,618,426
	Lawn tractors and riding mowers, front engine:					
35244 03	Under 10.0 hp (under 7.5 kW)	6	^a 4,779	4,872	^r 19,102	^r 19,141
35244 07	10.0 hp and over (7.5 kW and over)	13	1,024,403	1,033,101	937,873	987,406
	Lawn tractors and riding mowers, rear engine:					
35244 08	Under 8.0 hp (under 6.0 kW)	3	(¹⁶)	(¹⁶)	(¹⁶)	(¹⁶)
35244 10	8.0 to 9.9 hp (6.0 to 7.4 kW) ¹⁶	12	88,828	92,912	68,657	77,486
35244 11	10.0 hp and over (7.5 kW and over)	15	178,467	203,972	190,740	220,495
	Garden tractors:					
35244 12	Under 14.0 hp (under 10.5 kW)	6	11,524	22,055	^r 10,836	^r 30,173
35244 15	14.0 hp to 15.9 hp (10.5 kW to 11.9 kW)	6	(D)	(D)	(D)	(D)
35244 17	16.0 hp to 19.9 hp (12.0 kW to 14.9 kW)	11	73,129	219,071	60,258	177,381
35244 19	20.0 hp and over (15.0 kW and over)	8	12,821	65,496	^r 9,739	^r 50,227
35244 31	Other consumer riding lawn, garden, and snow equipment	4	(D)	(D)	(D)	(D)
35246 —	Parts and attachments for consumer lawn, garden, and snow equipment	(NA)	(X)	577,234	(X)	^r 574,090
	Nonriding:					
35246 03	Parts	47	(X)	129,430	(X)	^r 136,949
35246 05	Attachments	26	(X)	56,293	(X)	70,131
	Riding:					
	Parts:					
35246 11	For tractors and riding mowers	24	(X)	205,110	(X)	191,890
35246 13	For other equipment	8	(X)	7,002	(X)	^r 7,741
	Attachments:					
35246 15	Rotary mower decks	14	(X)	65,088	(X)	^r 53,915
35246 17	Rotary tiller attachments	9	(X)	^a 8,896	(X)	^a 7,041
35246 19	Blades, dozer	11	(X)	^a 11,112	(X)	^a 12,406
35246 21	Snow throwers	5	(X)	5,044	(X)	^r 7,922
35246 23	Carts and wagons	9	(X)	7,198	(X)	6,394
35246 25	All other attachments	26	(X)	82,061	(X)	79,701

Note: The percent of estimation of each item is indicated as follows: ^a10 to 25 percent of the item is estimated.^b25 to 50 percent of the item is estimated.-Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. pt. Partial. ^rRevised by 5 percent or more from previously published figures. (X) Not applicable.¹Data for product class 35231, "Wheel tractors," are combined with product class 3523E, "All other farm machinery, except parts" to avoid disclosing figures for individual companies (except 35231 87, "Attachments for wheel tractors").²Data for "Corn planters, etc., pull-type" are combined with "Corn planters, etc., mounted planters" to avoid disclosing figures for individual companies.³Data for "Fertilizer distributors, liquid" are combined with "Fertilizer distributors, anhydrous ammonia" to avoid disclosing figures for individual companies.⁴Data for the value of shipments of "Other attachments for haying machinery" are combined with "Other haying machinery" to avoid disclosing figures for individual companies.⁵Data for "Disc-chisel combination plows" are combined with "Other plows, except snow plows" to avoid disclosing figures for individual companies.⁶Data for "Brooders, battery" are combined with "Brooders, floor and hanging" to avoid disclosing figures for individual companies.⁷Data for "Poultry feeders, except turkey feeders" are combined with "Poultry waterers, except turkey waterers" to avoid disclosing figures for individual companies.⁸Data for "Operator cabs" are included with "Parts for farm transportation equipment" to avoid disclosing figures for individual companies.⁹Data for "Turf tractors, seeders, spreaders, and top dresser attachments, and irrigation systems, except agricultural and residential" are combined with "Sod cutters and sod harvesters" to avoid disclosing figures for individual companies.¹⁰Data for "Turf trucks" are combined with "Other commercial turf and grounds care equipment" to avoid disclosing figures for individual companies.¹¹Data for "Lawnmowers, reel, push-type" are combined with "Lawnmowers, rotary, push-type, gas-powered" to avoid disclosing figures for individual companies.¹²Data for "Lawnmowers, electric, all types" are included with "Lawnmowers, rotary, self-propelled" to avoid disclosing figures for individual companies.¹³Data for "Rotary garden motor tillers" are combined with "2-wheel tractors walking-type, except rotary tillers" to avoid disclosing figures for individual companies.¹⁴Data for "Powered lawn edgers/trimmers, other than fixed blade, gasoline engine" are combined with "Powered lawn edgers/trimmers, other than fixed blade; other, including electric" to avoid disclosing figures for individual companies.¹⁵Data for "Lawn sweepers, push-type and powered, except attachment-type" are combined with "Other consumer nonriding lawn, garden, and snow equipment" to avoid disclosing figures for individual companies.¹⁶Data for "Lawn tractors and riding mowers, rear engine under 8.0 hp" are combined with "Lawn tractors and riding mowers, rear engine 8.0 hp to 9.9 hp" to avoid disclosing figures for individual companies.

Table 3. SHIPMENTS, EXPORTS, AND IMPORTS OF FARM MACHINERY AND EQUIPMENT: 1992 AND 1991

[Quantity in units; value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Imports for consumption ²		Apparent consumption	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992								
Farm-type wheel tractors.....	(D)	(D)	18,712	458,132	79,664	1,008,858	(D)	(D)
Farm dairy mechanical installations, including milking machine vacuum pumping outfits.....	(D)	(D)	867	8,176	-	-	(D)	(D)
Cream separator machines.....	-	-	271	3,177	6,397	5,286	(NA)	(NA)
Sprayers and dusters (except aerial types).....	(X)	231,694	(NA)	99,568	1,798,780	19,857	(NA)	(NA)
Planting machinery and fertilizer distributors, pull-type or mounted.....	(X)	326,978	17,554	56,933	79,597	41,039	(NA)	(NA)
Disc harrows.....	9,981	32,902	1,358	6,336	87,516	23,777	96,139	50,343
Other harrows, rollers, pulverizers, and similar equipment.....	(X)	73,562	8,070	8,111	12,719	3,008	4,649	68,459
Combines.....	9,198	888,257	4,177	217,318	2,633	21,057	7,654	691,996
Other harvesting machines.....	(D)	(D)	2,515	34,323	3,709	30,772	(D)	(D)
Field forage harvesters.....	2,254	50,042	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Hay mowers, mower-conditioners, and windrowers.....	131,690	268,967	13,913	36,114	23,223	46,688	141,000	279,541
Other haymaking machines.....	31,195	(D)	2,213	23,126	5,002	7,594	33,984	(D)
Balers, including pickup balers.....	20,568	260,902	5,790	64,788	1,155	6,340	15,933	202,454
Moldboard plows.....	1,607	1,423	368	1,479	1,088	3,478	2,327	3,422
Other plows.....	9,220	58,690	3,211	8,853	36,445	7,665	42,454	57,502
Cultivators and weeder.....	20,037	69,821	40,647	23,309	32,002	36,042	11,392	82,554
Machinery for preparing animal feed....	8,425	85,913	4,302	31,470	15,374	3,584	19,497	58,027
Other machines for preparing crops for market or for use.....	62,512	102,841	3,714	7,642	7,498	3,417	66,296	88,616
Farm poultry incubators and brooders....	(D)	(D)	42,491	19,510	22,771	6,369	(D)	(D)
Nests and cages (poultry equipment)....	1,585,497	23,234	56,900	(NA)	83,370	9,387	1,611,967	(NA)
Other barn and barnyard equipment....	22,077,635	368,643	9,170	6,454	123,014	3,746	22,191,479	365,935
Self-propelled irrigation systems, center-pivot.....	8,281	239,260	-	-	-	-	(NA)	(NA)
All other self-propelled irrigation systems using 100-foot flexible hose feeder line and over.....	4,488	61,090	(NA)	140,390	24,410,363	18,714	(NA)	(NA)
Farm wagons and other farm transportation equipment.....	(D)	(D)	20,016	11,212	8,195	2,411	(D)	(D)
Riding turf mowers.....	41,678	291,131	10,622	41,914	2,073	6,048	33,129	255,265
Flail and gang mowers.....	39,915	52,649	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mowers for lawns, parks, or sports grounds and other commercial and turf grounds mowers.....	6,895,847	2,287,083	809,529	368,486	153,038	30,157	6,239,356	1,948,754
Snowblowers (snowthrowers).....	253,750	95,564	11,186	7,201	24,283	14,926	266,847	103,289
Powered lawn and hedge trimmers.....	7,284,453	408,913	910,286	49,892	417,064	52,183	6,791,231	411,204
1991								
Farm-type wheel tractors.....	(D)	(D)	19,789	434,073	79,738	988,562	(D)	(D)
Farm dairy mechanical installations, including milking machine vacuum pumping outfits.....	(D)	(D)	1,564	12,655	8,504	269	(D)	(D)
Cream separator machines.....	-	-	208	1,996	2,429	4,496	(NA)	(NA)
Sprayers and dusters, except aerial types.....	(X)	232,092	(X)	89,431	(X)	19,491	(NA)	(NA)
Planting machinery and fertilizer distributors, pull-type or mounted.....	(X)	316,177	18,184	50,659	62,130	66,664	(NA)	(NA)
Disc harrows.....	11,367	56,381	1,102	5,065	44,120	33,699	54,385	85,015
Other harrows, rollers, pulverizers, and similar equipment.....	(X)	78,705	5,493	6,731	10,798	3,529	5,305	75,503

See footnotes at end of table.

Table 3. **SHIPMENTS, EXPORTS, AND IMPORTS OF FARM MACHINERY AND EQUIPMENT: 1992 AND 1991—Continued**

[Quantity in units; value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Imports for consumption ²		Apparent consumption	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1991—Cont.								
Combines	11,555	1,064,358	3,631	181,407	1,719	22,827	9,643	905,778
Other harvesting machines	(D)	(D)	3,111	42,826	4,125	26,201	(D)	(D)
Field forage harvesters	3,804	96,466	1,508	32,430	312	4,377	(NA)	(NA)
Hay mowers, mower-conditioners, and windrowers	122,078	316,285	53,592	68,749	66,280	76,800	134,766	324,336
Other haymaking machines	32,943	(D)	2,685	23,011	9,937	14,348	40,195	(D)
Balers, including pickup balers	25,336	293,502	5,830	58,652	1,115	8,492	20,621	243,342
Moldboard plows	1,382	5,062	223	851	1,501	6,425	2,660	10,636
Other plows	10,826	69,372	4,127	9,767	33,664	14,392	40,363	73,997
Cultivators and weeders	23,647	91,270	(NA)	22,807	34,755	41,207	58,402	109,670
Machinery for preparing animal feed. ...	8,262	74,526	5,992	31,932	1,485	2,069	3,755	44,663
Other machines for preparing crops for market or for use	52,445	98,742	4,512	16,321	25,321	2,678	73,254	85,099
Farm poultry incubators and brooders ..	(D)	21,008	19,290	14,177	90,924	6,871	(D)	(D)
Nests and cages (poultry equipment) ...	1,889,056	21,158	72,566	(NA)	59,679	12,529	1,876,169	33,687
Other barn and barnyard equipment.	20,642,351	341,005	21,246	54,740	231,059	15,665	20,852,164	301,930
Self-propelled irrigation systems, center-pivot	8,276	232,557	2,667	48,494	2	26	(NA)	(NA)
All other self-propelled irrigation systems using 100-foot flexible hose feeder line and over	5,552	41,961	(X)	(NA)	16,467,628	13,699	(NA)	(NA)
Farm wagons and other farm transportation equipment	(D)	(D)	-	-	5,888	2,297	(D)	(D)
Riding turf mowers	43,484	288,620	10,298	35,460	1,550	4,257	34,736	257,417
Flail and gang mowers	43,834	54,924	1,160	7,425	373	1,001	(NA)	(NA)
Mowers for lawns, parks, or sports grounds and other commercial and turf grounds mowers	6,847,780	2,262,942	(NA)	329,776	111,638	19,544	6,959,418	1,952,710
Snowblowers (snowthrowers)	209,384	80,899	12,227	8,854	22,199	13,740	219,356	85,785
Powered lawn and hedge trimmers	6,817,119	340,798	829,311	42,924	525,720	46,227	6,513,528	344,101

Note: For comparison of Standard Industrial Classification-based product codes, Schedule B export numbers, and HTSUSA import numbers, see appendix B.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. *Revised by 5 percent or more from previously published figures. (X) Not applicable.

¹Source: Bureau of the Census report, EM 545, *U.S. Exports*.

²Source: Bureau of the Census report, IM 145, *U.S. Imports for Consumption*.

HISTORICAL NOTE

Data on farm machinery and equipment have been collected by the Bureau of the Census since 1920; data on lawn and garden equipment since 1978. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Cynthia Ramsey, 301-763-5440 or Mary Jane Gwynn, 301-763-7870.

10.2 CONSTRUCTION MACHINERY

INTRODUCTION

These data cover firms engaged in the manufacture of selected types of construction machinery. Very small firms (generally less than five employees) for which 1987 Census of Manufactures data were derived from administrative records of other government agencies are excluded. The statistics were collected by mail on Bureau of the Census annual Form MA35D, Construction Machinery. The survey panel includes all known producers of the types of products covered on the survey, except the very small firms excluded from the scope of the survey. Approximately 270 companies are included. No estimate is derived for the small firms excluded from the survey.

SUMMARY OF FINDINGS

Shipments of construction machinery totaled \$7.2 billion in 1992, a 3-percent decrease from the 1991 total of \$7.4 billion. Shipments of contractor's off-highway wheel tractors totaled \$323.8 million, representing a 33-percent increase from the 1991 shipments of \$244.2 million. Shipments of tracklaying tractors in 1992 were \$775.6 million, a decrease of 22 percent from the 1991 shipments of \$998.7 million. The 1992 shipments of track shovel loaders totaled \$1,758.4 million, a decrease of 5 percent from the 1991 total of \$1,855.5 million. Shipments of power cranes, draglines, and shovels in 1992 totaled \$1,248.8 million, an increase of 1 percent from the 1991 shipments of \$1,239.1 million. The 1992 shipments of mixers, pavers, and related equipment totaled \$603.5 million, an increase of 18 percent from the 1991 total of \$509.6 million.

The 1992 shipments of scrapers; graders; compactors; rollers; off-highway trucks, trailers, and wagons; and rough terrain forklifts totaled \$1,574 million, a decrease of 4 percent from the 1991 total of \$1,631.6 million. The 1992 shipments of equipment for mounting on tractors totaled \$221.3 million, an increase of 3 percent from the 1991 total of \$214.6 million. The 1992 shipments of self-propelled continuous ditchers and trenchers totaled \$122.5 million, a 9-percent increase from the 1991 total of \$112.2 million. Shipments of aerial work platforms totaled \$551.4 million in 1992, a decrease of 3 percent from the 1991 total of \$568.9 million.

EXPLANATION OF TERMS

Wheel Tractors, Contractor's Off-Highway Type. Wheel tractors designed primarily to be used as towing units for scrapers, trailers, wagons, and similar types of towed equipment for use on natural terrain. These units may be 2- or 4-wheel type.

Tractor Shovel Loaders—Wheel Type, Front-End Load (Integral Design, Rear Engine Mount). Complete machines originally conceived and designed as heavy duty, wheel type, front-end loaders, and not as wheel tractors, to receive shovel loading attachments.

Off-Highway Vehicles. Vehicles designed for operation off public highways to transport material or equipment on mining, construction, logging, petroleum development, and similar project sites.

Excavator. A commercial earth-moving machine equipped with a bucket-mounted front-end attachment mounted on a 360-degree revolving superstructure.

Crane. A machine having a front-end lifting attachment and operating machinery mounted on a revolving superstructure.

Cable Operated. A machine with front-end attachment functions performed by wire rope.

Hydraulic Excavator. A machine with front-end attachment functions performed hydraulically.

Crawler Mounted. A machine with two parallel continuous crawlers or tread belts.

Truck Mounted (Rubber). A machine which generally has two engines, one to propel the carrier and another to power the work functions. A truck or carrier mounted machine will have two operator stations and is designed for on- and off-highway travel.

Self-Propelled (Rubber). A machine which has only one engine and one operator station. The engine may be mounted in either the upper or lower works.

Net Engine Horsepower (nehp). Net flywheel performance as measured by manufacturer, with all standard accessories installed, operated, and corrected to 29.38 inches mercury (hg) and temperature of 85 degrees Fahrenheit. Tractors with torque converter transmission should be included in the same horsepower group as the comparable model tractor equipped with direct drive transmission. Where there is no comparable direct drive model tractor, include such tractors at 80 percent of net horsepower at the flywheel.

Hydraulic Crane. A machine with 360-degree rotation. On this machine, the boom is designed primarily for lifting the load by wire rope. The boom can also be extended, retracted, and raised and lowered hydraulically.

Integrated Hydraulic Truck Mounted Crane. A telescopic truck mounted (rubber) crane mounted on a purpose designed crane carrier chassis.

Pinned on Telescopic Crane. An hydraulically-powered multipurpose rotating crane with fixed or telescoping booms designed to lift and place materials by winch and load line, and which is mounted onto a commercially available vehicle having a platform or body.

Pinned on Articulated Crane. A stationary or vehicle mounted hydraulically powered multipurpose knuckle boom crane consisting of an inner and outer boom that can fold to a stowable position. Excluded are those machines commonly known as knuckle boom loaders.

Unmounted Cranes. These cranes are classified under "Construction machinery for mounting."

ABBREVIATIONS AND METRIC EQUIVALENTS

hp	horsepower = .7457 kilowatts (KW)
yd ³	cubic yard = .7646 cubic meters (m ³)
kg	kilogram = 2.205 pounds (lb)
ft	feet = .305 meters (m)
st	short ton = .907 metric tons
nehp	net engine horsepower
tph	tons per hour
lb	pounds

Table 4. **VALUE OF SHIPMENTS OF CONSTRUCTION MACHINERY: 1983 TO 1992**

[Millions of dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
3531A 00	Contractors off-highway wheel tractors	323.8	244.2	360.5	366.2	408.1	374.8	421.9	486.6	421.9	292.4
3531B 00	Tracklaying tractors.....	775.6	998.7	1,092.6	1,163.7	1,145.1	975.9	821.2	628.7	785.4	633.6
3531C 00	Tractor shovel loaders	1,758.4	1,855.5	2,235.9	2,212.0	2,027.6	1,782.5	1,679.0	1,754.1	1,791.9	1,515.9
3531E 00	Power cranes, draglines, and shovels	1,248.8	1,239.1	1,511.8	1,318.3	1,050.7	1,955.4	1,308.6	1,445.5	1,479.9	1,540.6
3531F 00	Mixers, pavers, and related equipment.....	603.5	509.6	609.6	701.8	565.3	569.9	566.2	632.1	485.5	366.5
3531G 00	Scrapers; graders; compactors; rollers; off-highway trucks, trailers, and wagons; and rough terrain forklifts.	1,574.0	1,631.6	2,023.7	1,881.3	1,524.2	1,249.9	(²)	(²)	(²)	(²)
3531H 00	Equipment for mounting on tractors ²	221.3	214.6	258.6	343.0	363.8	481.1	2,023.8	2,322.0	1,799.4	1,305.4
3531K 20	Self-propelled continuous ditchers and trenchers	122.5	112.2	129.7	153.6	141.2	127.6	125.6	118.0	129.8	140.4
3531K 90	Aerial work platform	554.4	568.9	814.9	799.8	591.6	529.3	(NA)	(NA)	(NA)	(NA)

(NA) Not available. ²Revised by 5 percent or more from previously published figures.

¹Beginning in 1987, "Parts for power cranes, draglines, and shovels," (product code 3531M 03) are not included in product code 3531E, "Power cranes, draglines, and shovels." Prior to 1987, these data were included with the old product code 35314.

²Data for product codes 3531G and 3531H were combined for the years 1983 to 1986.

Table 5. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED TYPES OF CONSTRUCTION MACHINERY: 1992 AND 1991**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3531A 00	Contractors' off-highway wheel tractors	13	3,440	323,773	2,605	244,180
	Towing tractors	(NA)	1,498	130,798	1,427	127,547
3531A 13	Single axle	5	1,229	105,335	1,181	101,528
	Two axle:					
3531A 20	Under 100 hp	1	(¹)	(¹)	(¹)	(¹)
3531A 22	100 through 149 hp	3	(¹)	(¹)	(¹)	(¹)
3531A 24	150 hp and over	4	¹ 269	¹ 25,463	¹ 246	¹ 26,019
3531A 34	Rubber-tired dozers	2	(²)	(²)	(²)	(²)
3531A 37	Wheeled log skidders, self-propelled	5	² 1,942	² 192,975	² 1,178	² 116,633
3531B 00	Crawler tractors	4	5,846	775,550	7,193	998,740
3531B 30	Under 90 nehp	3	(D)	(D)	(D)	(D)
3531B 36	90 through 159 nehp	4	1,108	102,609	¹ 1,336	125,411
3531B 40	160 nehp and over	3	(D)	(D)	(D)	(D)
3531C 00	Loaders	(NA)	56,508	1,758,377	56,186	1,855,540
3531C 60	Skid steer loaders	7	(D)	(D)	(D)	(D)
	Wheel loaders, non-skid steer	(NA)	6,766	823,221	7,376	893,287
3531C 71	Under 79 nehp	6	601	16,787	570	15,351
3531C 72	80 through 149 nehp	5	2,531	161,919	2,914	186,642
3531C 73	150 through 249 nehp	7	2,492	278,121	2,432	274,209
3531C 74	250 nehp and over	6	1,142	366,394	1,460	417,085
	Crawler loaders	4	(D)	(D)	(D)	(D)
3531C 81	Under 90 nehp	4	(D)	(D)	(D)	(D)
3531C 84	90 nehp and over	3	(D)	(D)	(D)	(D)
3531C 95	Backhoes (wheel tractor-chassis shipped as part of front engine mount)	5	(D)	(D)	(D)	(D)
3531E 00	Power cranes, draglines, shovels (excavators), and attachments	49	19,695	1,248,824	17,427	1,239,114
	Excavators	(NA)	3,393	502,534	3,070	452,780
	Crawler mounted	(NA)	3,023	446,798	2,650	390,690
3531E 03	Cable operated	2	(D)	(D)	(D)	(D)
	Hydraulic operated:					
3531E 05	Under 25 metric tons	9	2,072	212,058	1,753	176,620
3531E 06	25 through 40 metric tons	5	406	55,703	355	49,383
3531E 07	Over 40 metric tons	5	(D)	(D)	(D)	(D)
3531E 19	Wheel (rubber) mounted	6	370	55,736	420	62,090
	Power cranes	(NA)	3,984	560,382	4,129	633,784
	Lattice boom	(NA)	³ 149	³ 143,625	³ 161	³ 192,704
	Crawler mounted	(NA)	³ 118	³ 125,348	³ 107	³ 163,248
	Maximum working load:					
3531E 20	Under 91 tons	5	61	20,965	45	15,423
3531E 26	91 through 120 tons	2	(⁴)	(⁴)	(⁴)	(⁴)
3531E 29	121 tons and over	4	³ ⁴ 57	³ ⁴ 104,383	³ ⁴ 62	⁴ 147,825
	Wheel (rubber) mounted	(NA)	31	18,277	54	29,456
3531E 37	Under 121 tons	3	15	4,886	36	14,729
3531E 38	121 tons and over	4	16	13,391	18	14,727
	Hydraulic operated, telescopic boom	(NA)	3,835	416,757	3,968	441,080
3531E 41	Crawler mounted	2	(D)	(D)	(D)	(D)
	Wheel (rubber mounted), multiple control stations	(NA)	(D)	(D)	(D)	(D)
	Maximum working load:					
3531E 51	Under 21 tons	4	(D)	(D)	(D)	(D)
3531E 52	21 through 30 tons	5	96	13,143	116	17,594
3531E 53	31 through 55 tons	4	⁵ 210	⁵ 77,222	⁵ 339	⁵ 108,920
3531E 54	56 tons and over	3	(⁵)	(⁵)	(⁵)	(⁵)
3531E 57	Pinned on type, telescopic and articulated .	4	(D)	(D)	(D)	(D)
	Wheel (rubber mounted), one control station	(NA)	1,705	248,143	1,791	255,496
	Maximum working load:					
3531E 68	Under 19 tons	9	723	56,631	828	59,714
3531E 65	19 through 25 tons	5	272	32,966	277	34,782
3531E 66	26 tons and over	5	710	158,546	686	161,000
3531E 75	Draglines, crawler, and/or tub	3	(³)	(³)	(³)	(³)

See footnotes at end of table.

Table 5. QUANTITY AND VALUE OF SHIPMENTS OF SELECTED TYPES OF CONSTRUCTION MACHINERY: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3531E 00	Power cranes, draglines, shovels (excavators), and attachment—Cont.					
	Other cranes	(NA)	3,795	100,748	3,014	82,195
3531E 81	Locomotive (except wrecking)	4	8	2,230	¹ 14	¹ 5,653
	Pedestal or shipmounted marine cranes:					
3531E 82	Telescopic or box boom	4	⁶ 65	⁶ 19,537	⁶ 75	⁶ 20,060
3531E 86	Lattice boom	3	(⁶)	(⁶)	(⁶)	(⁶)
3531E 85	All other cranes, including locomotive wrecking	6	3,722	78,981	2,925	56,482
	Attachments for power cranes, draglines, and excavators (sold separately)	(NA)	8,523	85,160	⁷ 214	70,355
3531E 94	Hoe	4	6,325	13,280	5,058	7,754
3531E 95	Dragline buckets	4	163	11,911	144	7,021
3531E 97	Clamshell/grapple	5	836	36,858	¹ 687	31,103
3531E 98	All other attachments	12	1,199	23,183	¹ 325	¹ 24,477
3531F 00	Mixers, pavers, and related equipment	82	132,107	603,522	¹ 119,229	509,565
	Concrete:					
	Mixers:					
	Portable (except plaster and mortar):					
3531F 21	Truck-mixer agitator	9	3,930	122,855	3,465	¹ 89,868
3531F 25	Other than truck-mixer	8	497	3,281	¹ 1,031	¹ 2,387
3531F 31	Plaster and mortar	7	7,426	12,250	¹ 5,604	¹ 9,005
	Concrete pavers:					
3531F 33	Slipform machines, including multipurpose, automated curb and gutter, and concrete slipform pavers	10	351	51,847	268	46,462
3531F 34	Nonautomated (extruder) curbers and concrete placer spreaders	3	(D)	(D)	¹ 129	¹ 3,622
3531F 39	Concrete trowels	9	6,435	8,407	⁷ 157	⁸ 833
3531F 40	Concrete vibrators	11	101,828	22,008	90,072	19,043
3531F 42	Concrete screeds	9	6,509	4,222	⁶ 803	¹ 3,349
3531F 43	Concrete batching plants	13	368	32,491	289	32,316
	Concrete pumps, mobile:					
	Trailer mounted:					
3531F 60	Under 25 yd ³ /hr	5	(⁷)	(⁷)	(⁷)	(⁷)
3531F 62	25 yd ³ /hr. and over	4	⁷ 641	⁷ 46,686	⁷ 710	⁷ 64,323
3531F 64	Truck mounted	3	(⁷)	(⁷)	(⁷)	(⁷)
	Bituminous:					
3531F 66	Distributors	7	429	15,102	483	19,252
	Pavers, self-propelled:					
3531F 71	Under 22,000 lb gross weight	9	524	20,364	460	¹ 16,193
3531F 75	22,000 lb gross weight and over	5	497	74,559	408	59,600
3531F 80	Pavers, not self-propelled	4	(D)	(D)	76	717
	Asphalt plants, including cold mix central plants:					
3531F 82	Less than 7,500 lb (239 tph)	4	36	17,203	31	12,843
3531F 84	7,500 lb and over (240 tph and over)	6	74	77,529	67	62,076
3531F 85	Stabilization mixing equipment, including central plants and mix-in-place	55	160	31,478	⁸ 138	⁸ 31,155
3531F 89	Cold planers/milling machines (self-propelled)	4	100	25,923	(⁸)	(⁸)
3531F 98	Other concrete and bituminous equipment, including mixers, heating kettles, heaters, circulators, travel mix-type, and spreader boxes	18	2,086	33,095	2,038	28,521
3531G pt.	Scraper bowls	7	1,106	92,604	1,260	99,106
3531G 01	Conventional scraper bowls (dig, carrying, and hauling) used as part of a self-propelled, nonelevating, 2-wheel type scraper, SAE struck rating	3	(D)	(D)	(D)	(D)
3531G 03	Elevating scraper bowls (dig, carrying, and hauling), 2- and 4-wheel type, SAE heaped rating	4	(D)	(D)	(D)	(D)
3531G 05	All other scraper bowls, including towed type	2	(D)	(D)	(D)	(D)
3531G pt.	Motor graders and light maintainers	5	2,894	343,101	3,289	355,806
3531G 11	Under 145 nehp	5	(D)	(D)	(D)	(D)
3531G 17	145 nehp and over	3	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 5. QUANTITY AND VALUE OF SHIPMENTS OF SELECTED TYPES OF CONSTRUCTION MACHINERY: 1992 AND 1991—Continued

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3531G pt.	Rollers and compactors (except hand-held)	19	4,880	233,457	4,111	185,988
	Self-propelled type, ride on	(NA)	(D)	(D)	(D)	(D)
	Static compaction equipment (fully ballasted). Smooth steel wheel rollers, tandem:	(NA)	1,822	95,279	1,614	87,641
3531G 21	Under 3 metric tons	10	832	5,784	750	4,738
3531G 23	3 through 5.4 metric tons	5	192	5,106	103	2,511
3531G 26	5.5 metric tons and over	4	208	7,787	156	6,050
	Pneumatic tire rollers:					
3531G 29	Under 2.5 metric tons	4	⁹ 590	⁹ 76,602	⁹ 605	⁹ 74,342
3531G 31	2.5 metric tons and over	2	(⁹)	(⁹)	(⁹)	(⁹)
	Multiple projection steel wheel rollers:					
3531G 33	Embankment	1	(⁹)	(⁹)	(⁹)	(⁹)
3531G 35	Landfill	1	(⁹)	(⁹)	(⁹)	(⁹)
	Vibratory compaction equipment (fully ballasted)	(NA)	(D)	(D)	(D)	(D)
	Single drum with one or two drive wheels . .	(NA)	1,569	87,373	1,377	71,893
3531G 37	Under 5 metric tons	5	205	7,228	162	3,638
3531G 39	5 through 7 metric tons	6	354	18,674	240	11,061
3531G 42	8 metric tons and over	5	1,010	61,471	975	57,194
	Double drum, two drums vibrating	(NA)	1,141	47,531	731	¹ 23,224
3531G 45	Under 3 metric tons	4	(D)	(D)	(D)	(D)
3531G 47	3 through 4 metric tons	4	(D)	(D)	62	1,520
3531G 49	5 through 7 metric tons	4	106	5,435	97	4,679
3531G 51	8 through 11.2 metric tons	4	(D)	(D)	(D)	(D)
3531G 53	11.3 metric tons and over	3	(D)	(D)	(D)	(D)
3531G 55	Double drum with one drum vibrating	2	(D)	(D)	(D)	(D)
3531G 57	Other compactors (except hand-held)	1	(D)	(D)	(D)	(D)
3531G 91	Towed type rollers, including pneumatic tire, bar type, vibratory-smooth	1	(D)	(D)	(D)	(D)
3531G pt.	Off-highway vehicles	14	2,476	727,352	2,501	822,894
3531G 71	Rear dump haulers	9	(D)	(D)	(D)	(D)
3531G 73	Integral self-powered side and bottom dumps, including coal haulers	2	(D)	(D)	(D)	(D)
3531G 75	Off-highway truck-type, rear dump chassis used as a tractor for towing earth, rock, coal, and ore trailers	2	(D)	(D)	(D)	(D)
3531G 77	Other truck-type tractor chassis used for log hauling, oilfields, desert and other uses	3	(D)	(D)	(D)	(D)
3531G 79	Off-highway trailers and wagons (end, side, and bottom dump)	2	(D)	(D)	(D)	(D)
3531G pt.	Rough terrain forklifts (integral units only)	12	2,790	177,478	2,609	167,853
3531G 81	2-wheel drive, vertical mast	9	1,338	82,988	1,082	70,896
3531G 83	4-wheel drive, vertical mast	6	71	2,390	41	1,401
3531G 85	2- and 4-wheel drive, variable reach	6	1,381	92,100	1,486	95,556
3531H 00	Construction machinery for mounting	35	75,302	221,344	⁷ 1,301	⁷ 214,645
3531H 01	Sidebooms or pipehandlers	2	(D)	(D)	(D)	(D)
3531H 03	Dozers for crawler and wheel tractors	9	954	7,273	⁹ 980	⁷ 7,738
	Winches (towing, logging, and oilfield types):					
3531H 05	Electric	4	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
3531H 07	Other, including hydraulic	7	¹⁰ 48,633	¹⁰ 57,378	¹⁰ 47,777	¹⁰ 69,575
	Backhoes:					
3531H 09	Under 14-ft digging depth	9	¹¹ 8,640	¹¹ 63,187	¹¹ 7,343	¹¹ 55,863
3531H 11	14-ft digging depth and over	3	(¹¹)	(¹¹)	(¹¹)	(¹¹)
3531H 13	Front-end loaders, including shovel loaders . .	5	(D)	(D)	(D)	(D)
3531H 15	Logging arches	3	(D)	(D)	(D)	(D)
3531H 17	Rippers and rooters, heavy rear-mounted . . .	3	(D)	(D)	(D)	(D)
3531H 19	Continuous ditching and trenching attachments .	3	54	289	154	588
3531H 21	Forklift attachments, including only forklift mast sold separately	5	4,418	21,040	3,354	13,281
3531H 23	All other construction machinery for mounting, including cranes, cable power control units, and hydraulic power control units	6	(D)	(D)	³ 893	² 3,546

See footnotes at end of table.

Table 5. **QUANTITY AND VALUE OF SHIPMENTS OF SELECTED TYPES OF CONSTRUCTION MACHINERY: 1992 AND 1991—Continued**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3531K 20	Self-propelled continuous ditchers and trenchers (integral units only)	9	6,117	122,524	5,879	112,180
	Ladder-type digging element	(NA)	(D)	(D)	(D)	(D)
3531K 14	Under 2,000 lb gross weight	5	(¹²)	(¹²)	2,550	14,691
3531K 15	2,000 through 4,999 lb gross weight	5	¹² 5,010	¹² 60,817	2,389	46,510
3531K 16	5,000 lb gross weight and over	5	¹³ 1,107	¹³ 61,707	¹³ 940	¹³ 50,979
3531K 18	Wheel-type digging element	3	(¹³)	(¹³)	(¹³)	(¹³)
3531K 90	Aerial work platforms	27	22,187	554,444	22,154	568,894
3531K 81	Boom-type, self-propelled	8	4,730	214,385	4,464	214,020
3531K 83	Scissors, self-propelled	12	7,803	111,786	7,520	107,418
3531K 85	Not self-propelled, boom and scissors type	6	1,776	8,921	1,557	8,897
3531K 87	Truck mounted	15	7,878	219,352	8,613	238,559

(D) Data withheld to avoid disclosing figures for individual companies.
published figures.

(NA) Not available.

¹Revised by 5 percent or more from previously¹Data for product codes 3531A 20 and 3531A 22 are included with data for product code 3531A 24 to avoid disclosing figures for individual companies.²Data for product code 3531A 34 are included with data for product code 3531A 37 to avoid disclosing figures for individual companies.³Data for product code 3531E 75 are included with data for product codes 3531E and 3531E 29 to avoid disclosing figures for individual companies.⁴Data for product code 3531E 26 are included with data for product code 3531E 29 to avoid disclosing figures for individual companies.⁵Data for product code 3531E 54 are included with data for product code 3531E 53 to avoid disclosing figures for individual companies.⁶Data for product code 3531E 86 are included with data for product code 3531E 82 to avoid disclosing figures for individual companies.⁷Data for product codes 3531F 60 and 3531F 64 are included with data for product code 3531F 62 to avoid disclosing figures for individual companies.⁸Data for product code 3531F 89 are included with data for product code 3531F 85 to avoid disclosing figures for individual companies.⁹Data for product codes 3531G 31, 3531G 33, and 3531G 35 are included with data for product code 3531G 29 to avoid disclosing figures for individual companies.¹⁰Data for product code 3531H 05 are included with data for product code 3531H 07 to avoid disclosing figures for individual companies.¹¹Data for product code 3531H 11 are included with data for product code 3531H 09 to avoid disclosing figures for individual companies.¹²Data for product code 3531K 14 are included with data for product code 3531K 15 to avoid disclosing figures for individual companies.¹³Data for product code 3531K 13 are included with data for product code 3531K 16 to avoid disclosing figures for individual companies.

Table 6. SHIPMENTS, EXPORTS, AND IMPORTS OF CONSTRUCTION MACHINERY: 1992 AND 1991

[Quantity in units; value in thousands of dollars]

Product code	Product description	Manufacturers' shipments ¹		Export shipments ¹		Imports for consumption ^{1 3}	
		Quantity	Value	Quantity	Value as reported ²	Quantity	Value
	1992						
3531A 13, 20, 22, 24	Contractors' off-highway wheel tractors for use as towing unit.	1,498	130,798	1,006	40,515	7,099	25,693
3531A 34	Rubber-tired dozers AND						
3531A 37	Wheeled log skidders, self-propelled	1,942	192,975	1,848	58,910	3,421	49,324
3531B 30, 36	Crawler tractors (net engine horsepower - nehp): Under 159 nehp AND						
3531B 40	160 nehp and over.	5,846	775,550	1,899	339,678	2,371	114,041
3531C 60	Skid steer loaders; 4-wheel drive, skid steer	(D)	(D)	2,192	72,095	2,491	73,199
3531C 71-74	Wheel loaders, rear engine mount, integral design; 4-wheel drive, non-skid steer	6,766	823,221	(NA)	370,874	2,655	176,893
	Crawler loaders (net engine horsepower - nehp):						
3531C 81	Under 90 nehp	(D)	(D)	97	3,873	148	7,943
3531C 84	90 nehp and over	(D)	(D)	41	5,190	452	54,318
3531E 03	Excavators, cable operated, crawler mounted AND						
3531E 05-07	Excavators, hydraulic operated, crawler mounted	3,023	446,798	1,170	155,209	3,238	257,595
3531E 19	Excavators, hydraulic operated, wheel (rubber) mounted, all sizes	370	55,376	42	2,415	469	34,434
3531E 20, 26, 29, 41, 57	Cranes, crawler mounted AND						
3531E 37-38, 51-54, 65-66, 68	Cranes, wheel mounted.	3,934	560,382	(NA)	129,247	6,676	32,895
3531E 82, 86	Cranes, pedestal or shipmounted	65	19,537	(NA)	8,067	1,093	3,594
3531E 95	Dragline buckets, attachment.	163	11,911	(NA)	3,498	90	1,232
3531E 97	Clamshell/grapple attachment.	836	36,858	(NA)	6,146	5,178	1,477
3531F 33-34	Concrete pavers	(D)	(D)	8,418	24,347	299	1,604
3531F 66, 71, 75, 80	Bituminous pavers	(D)	(D)	2,451	26,927	3,296	3,557
3531F 60, 62, 64	Concrete pumps	641	46,686	(NA)	19,308	599	3,208
3531G 01, 03, 05	Scraper bowls	1,106	92,604	107	2,122	29	243
3531G 11, 17	Motor graders and light maintainers	2,894	343,101	2,192	163,761	813	63,275
3531G 21, 23, 26, 29, 31, 33, 35	Self-propelled static compaction equipment.	1,822	95,279	686	31,472	135	3,708
3531G 37, 39, 42, 45, 47, 49, 51, 53, 55, 57	Self-propelled vibratory compaction equipment.	(D)	(D)	1,364	39,336	3,213	37,304
3531G 91	Towed type rollers and compactors	(D)	(D)	22,871	36,670	2,102	5,580

See footnotes at end of table.

Table 6. **SHIPMENTS, EXPORTS, AND IMPORTS OF CONSTRUCTION MACHINERY: 1992 AND 1991**—Continued

[Quantity in units; value in thousands of dollars]

Product code	Product description	Manufacturers' shipments ¹		Export shipments ¹		Imports for consumption ^{1 3}	
		Quantity	Value	Quantity	Value as reported ²	Quantity	Value
	1992—Cont.						
3531G 71	Off-highway rear-dump haulers AND						
3531G 73	Off-highway integral self-powered side and bottom dumps, including coal haulers AND						
3531G 75, 77	All other off-highway truck-type tractor chassis	2,476	727,352	(NA)	425,335	1,016	87,705
	Construction machinery for mounting:						
3531H 01	Sidebooms or pipehandlers	(D)	(D)	209	19,660	88	5,042
3531H 03	Dozers, for crawler and wheel tractors. . .	954	7,273	(NA)	14,121	6,369	25,586
3531H 05, 07	Winches (towing, logging, and oilfield types).	48,633	57,378	(NA)	55,203	571,351	29,286
3531H 09, 11	Backhoes	8,640	63,187	1,242	5,832	32,844	2,700
3531H 13	Front-end loaders	(D)	(D)	18,473	13,691	10,297	3,803
3531H 17	Rippers and rooters	(D)	(D)	281	2,395	697	1,298
	Self-propelled continuous ditchers and trenchers (integral units):						
3531K 14-16	Ladder-type digging element AND						
3531K 18	Wheel-type digging element	6,117	122,524	2,406	36,645	4	320
	1991						
3531A 13, 20, 22, 24	Contractors' off-highway wheel tractors for use as towing unit.	1,427	127,548	1,040	39,949	4,104	20,546
3531A 34	Rubber-tired dozers AND						
3531A 37	Wheeled log skidders, self-propelled	1,178	116,633	(NA)	44,582	2,569	54,239
	Crawler tractors (net engine horsepower - nehp):						
3531B 30, 36	Under 159 nehp AND						
3531B 40	160 nehp and over	7,193	998,740	1,992	370,501	2,231	101,637
3531C 60	Skid steer loaders; 4-wheel drive, skid steer	(D)	(D)	2,189	92,615	2,060	76,552
3531C 71-74	Wheel loaders, rear engine mount, integral design; 4-wheel drive, non-skid steer	7,376	893,287	(NA)	387,564	2,406	138,268
	Crawler loaders (net engine horsepower - nehp):						
3531C 81	Under 90 nehp	(D)	(D)	97	4,203	114	5,803
3531C 84	90 nehp and over	(D)	(D)	36	3,868	273	31,673
3531E 03	Excavators, cable operated, crawler mounted AND						
3531E 05-07	Excavators, hydraulic operated, crawler mounted	2,650	390,690	1,168	163,586	2,513	217,686
3531E 19	Excavators, hydraulic operated, wheel (rubber) mounted, all sizes	420	62,090	54	14,624	275	20,369
3531E 20, 26, 29, 41, 57	Cranes, crawler mounted AND						
3531E 37-38, 51-54, 65-66, 68	Cranes, wheel mounted.	4,129	633,784	2,436	164,959	4,645	36,672
3531E 82, 86	Cranes, pedestal or shipmounted	75	20,060	(NA)	3,966	184	15,734
3531E 95	Dragline buckets, attachment.	144	7,021	(NA)	2,823	45	1,724
3531E 97	Clamshell/grapple attachment.	687	31,103	(NA)	3,685	647	859

See footnotes at end of table.

Table 6. **SHIPMENTS, EXPORTS, AND IMPORTS OF CONSTRUCTION MACHINERY: 1992 AND 1991—Continued**

[Quantity in units; value in thousands of dollars]

Product code	Product description	Manufacturers' shipments ¹		Export shipments ¹		Imports for consumption ^{1 3}	
		Quantity	Value	Quantity	Value as reported ²	Quantity	Value
	1991—Cont.						
3531F 33-34	Concrete pavers	'397	'50,084	(NA)	19,613	89	448
3531F 66, 71, 75, 80	Bituminous pavers	1,427	95,762	(NA)	22,267	702	6,27
3531F 60, 62, 64	Concrete pumps	710	64,323	(NA)	25,813	523	9,612
3531G 01, 03, 05	Scraper bowls	1,260	99,106	315	3,355	38	405
3531G 11, 17	Motor graders and light maintainers	3,289	355,806	2,627	215,430	307	20,322
3531G 21, 23, 26, 29, 31, 33, 35	Self-propelled static compaction equipment.	1,614	87,641	732	37,830	300	6,510
3531G 37, 39, 42, 45, 47, 49, 51, 53, 55, 57	Self-propelled vibratory compaction equipment.	(D)	(D)	1,223	37,848	3,065	40,416
3531G 91	Towed type rollers and compactors	(D)	(D)	20,171	30,537	2,001	5,034
3531G 71	Off-highway rear-dump haulers AND						
3531G 73	Off-highway integral self-powered side and bottom dumps, including coal haulers AND						
3531G 75, 77	All other off-highway truck-type tractor chassis	2,501	822,894	(NA)	497,588	760	43,822
3531H 01	Construction machinery for mounting: Sidebooms or pipehandlers	(D)	(D)	273	17,406	43	4,023
3531H 03	Dozers, for crawler and wheel tractors. ...	'980	'7,738	(NA)	(NA)	7,283	20,563
3531H 05, 07	Winches (towing, logging, and oilfield types).....	47,777	69,575	(NA)	51,159	389,885	29,391
3531H 09, 11	Backhoes	7,343	55,663	1,333	5,239	640	1,037
3531H 13	Front-end loaders	(D)	(D)	14,303	13,837	25,330	6,835
3531H 17	Rippers and rooters	(D)	(D)	223	2,608	796	873
3531K 14-16	Self-propelled continuous ditchers and trenchers (integral units): Ladder-type digging element AND						
3531K 18	Wheel-type digging element	5,879	112,180	1,536	25,485	20	680

(D) Data withheld to avoid disclosing figures for individual companies. 5 percent or more from previously published figures.

(NA) Not available.

nehp - Net engine horsepower.

*Revised by

¹For comparison of Standard Industrial Classification-based (SIC) product codes, Schedule B export numbers, and HTSUSA import numbers, see appendix B.²Source: Bureau of the Census report, EM 545, *U.S. Exports*.³Source: Bureau of the Census report, IM 145, *U.S. Imports for Consumption*.**HISTORICAL NOTES**

Data on construction machinery have been collected by the Bureau of the Census since 1942. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Richard Wiesler, 301-763-7867.

10.3 MINING MACHINERY AND MINERAL PROCESSING EQUIPMENT

INTRODUCTION

These data cover firms engaged in the manufacture of underground mining machinery; mineral processing and beneficiation machinery and equipment; crushing, pulverizing, and screening machinery; portable oil and gas and water drilling rigs; and related mining machinery and equipment, including underground drills and breakers, conveyors and hoists, and mine cars and locomotives.

The statistics were collected by mail on Bureau of the Census annual Form MA35F, Mining Machinery and Mineral Processing Equipment. The survey panel includes all known manufacturers of mining machinery and mineral processing equipment, approximately 164 companies.

SUMMARY OF FINDINGS

In 1992, the manufacturer's value of shipments of selected types of mining machinery and related equipment totaled \$1.0 billion, a decrease of 8 percent from the 1991 figure of \$1.1 billion. The 1992 total included shipments of \$65.4 million of portable crushing, pulverizing, and screening machinery, which was a 3-percent increase from the 1991 total of \$63.8 million. Underground mining machinery equipment totaled \$248.5 million in 1992, a 22-percent decrease from the 1991 total of \$318.3 million. Mineral processing and beneficiation equipment totaled \$70.5 million in 1992, a 6-percent decrease from the 1991 total of \$75.2 million. In 1992, stationary, crushing, pulverizing and screening machinery totaled \$134.6 million, a 2-percent increase from the \$131.8 million reported in 1991. Drills and breakers totaled \$161.2 million in 1992, a 9-percent decrease from the \$176.9 million in 1991. Portable drilling rigs totaled \$255.0 million in 1992, a 3-percent decrease from the \$262.3 million reported in 1991. In 1992, mine conveyors, hoists, and locomotives totaled \$81.3 million, a 2-percent decrease from the \$82.9 million reported in 1991.

EXPLANATION OF TERMS

Mining Machinery. Heavy machinery and equipment used by the mining industry in the exploration and development of solid mineral properties. Mining is used here in the broad sense to include the extraction of solid minerals occurring naturally, such as coal and ores. The term mining also includes quarrying, milling (crushing, screening, washing, flotation, etc.), and other preparations customarily done at the mine site or as a part of mining activity. Portable drilling rigs for use in oil and gas fields or for drilling water wells are also included for the purpose of this survey.

Auger Drills. Machines which utilize continuous flight auger bits for removing cuttings.

Bucket Drills. Machines which rotate a bucket and remove cuttings by lifting the bucket to be dumped.

Cable Tool. Machines that use percussion-type tools and clean the hole with tubular-type bailing tools.

Centrifugal Dryers. Devices for the removal of different densities by means of centrifugal action.

Centrifuges. Devices for classifying materials of different densities by means of centrifugal action.

Classifiers, Sizing, Washing, and Dewatering (Excluding Cyclones). Machines for making size separations of ores, for separating ore from the vein matter, or for cleaning coal from slack.

Cyclones, Wet. Devices designed to make a size separation or remove a constituent, such as water, from a material in process by means of centrifugal force.

Dense Medium Vessels. Separatory vessels for the treatment of ores by the sinkfloat principle, using fluid medium, the density of which lies between that of the materials to be separated.

Dryers, Thermal. Machines for reducing moisture content of a mineral product by means of heat.

Feeders, Apron, Vibrating, and Reciprocating. Devices for the uniform feeding of coal and ores to crushers, mixers, dryers, furnaces, and conveyors.

Filters. Disk, drum, and pan filters for dewatering pulps and flotation concentrates.

Flotation Machines. Machines in which finely crushed ore (mineral and valueless gangue) is agitated in water with the addition of air or other gas and a reagent (chemical or oil). This agitation causes the mineral particles to attach themselves to the air of gas bubbles that rise to the surface, where the mineral particles are removed in froth known as concentrate.

Jigs. Machines to separate heavier materials from lighter materials by agitation in water.

Magnetic Separators. Devices broadly classified as concentrators, purifiers, reclaimers, and protectors. Magnets of special design fit the needs of these applications.

Portable Drilling Rigs. Drills mounted on a carrier and used on the surface (above ground).

Pull-Back Capacity. Lifting capacity of drawworks or hoisting capacity of taphead.

Pull-Down Capacity. Capacity to apply bit pressure.

Reverse Circulation. Machines using a rotary drilling process where the drill cuttings and fluid return to the surface inside the drill stem (large diameter holes, 18" or larger).

Rotary Drills. Machines using rotary drill pipe, continuous fluid, and a mud pump, air compressor, or combination to clear the hole of filling.

Screens, Vibrating. Machines used for dry or wet screening applications, such as sizing, washing, and dewatering of ores, coal, sand, and gravel.

Scrubbers (All Types, Including Drums, Log Washers, and Attritioning Machines). Devices for mechanically removing any undesirable material from the surface of a mineral product.

Spirals, Concentrating. A spiral chute that separates heavy particles from light particles, by centrifugal action.

Table, Concentrating. Devices for separating finely crushed particles of coal or ore from the worthless rock or vein matter by taking advantage of differences in particle density and size.

Thickeners (Excluding Wet Cyclones). Devices for the separation of solids from the liquids in which they are suspended by introducing the suspension into tanks or basins to permit gravitational settling or sedimentation of the solids.

Unit. Complete rig, including carrier.

Table 7. MANUFACTURERS' SHIPMENTS OF MINING MACHINERY AND MINERAL PROCESSING EQUIPMENT, BY TYPE: 1992 AND 1991

[Quantity in units except as specified; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
3531K —	Mining machinery and mineral processing equipment.	133	(X)	1,017,072	(X)	1,111,304
	Portable crushing, screening, washing, and combination plants	17	468	65,371	471	63,794
	Crushing plants (classification based upon the type of crusher first in the processing flow):					
3531K 41	Gyratory (cone)	6	63	16,008	73	17,159
3531K 42	Impact	9	38	9,745	30	7,467
3531K 43	Jaw	10	56	17,889	'57	17,671
3531K 44	Roll AND	2				
3531K 45	Screening plants AND	10				
3531K 46	Washing and other plants	2	311	21,729	311	'21,497
35325 —	Underground mining machinery (except parts sold separately)	22	1,293	248,485	1,877	318,315
35325 11	Longwall mining machines, coal type ¹ AND	3				
35325 31	Loader machines, underground mine	5	378	78,513	413	75,516
35325 41	Continuous mining machines, borer, ripper, auger, and drum, including roadheading machines (coal) ²	5	128	98,159	172	136,086
35325 56	Face-haulage vehicles, rubber tired, self-propelled ³	5	125	25,789	262	46,117
35325 58	Ratio feeders and feeder breakers AND	5				
35325 75	Mine cars, track, and haulage	1	85	11,824	111	8,975
35325 77	Rock dusters	4	149	2,033	124	1,840
35325 70	Support vehicles, rubber tired or track mounted ⁴	11	213	17,048	442	31,966
35325 98	Other underground mining machinery, not elsewhere classified	8	215	15,119	353	17,815
35326 —	Mineral processing and beneficiation equipment (except parts sold separately)	40	5,310	70,492	5,364	75,218
35326 52	Flotation machines (quantity represents number of cells) AND	4				
35326 53	Dense medium vessels AND	-				
35326 54	Jigs AND	2				
35326 55	Tables, concentrating	2	145	6,520	203	7,622
35326 56	Classifiers, sizing, washing, and dewatering, excluding cyclones	12	397	12,396	416	12,790
35326 57	Cyclones, wet, including heavy medium cyclones AND	5				
35326 58	Centrifuges AND	3				
35326 59	Centrifugal dryers	2	2,375	16,010	2,303	'17,297
35326 61	Scrubbers (all types, including drums, log washers, attritioning machines, etc.)	5	59	2,460	62	2,048
35326 62	Dryers, thermal AND	3				
35326 63	Spirals, concentrating AND	1				
35326 64	Thickeners, excluding wet cyclones AND	4				
35326 65	Filters (quantity represents area in square feet)	2	286	8,309	204	12,376
	Feeders:					
	Vibrating:					
35326 71	Electromagnetic	5	708	4,843	683	4,416
35326 72	Mechanical	16	604	12,095	598	10,670
35326 73	Reciprocating AND	4				
35326 74	Apron	2	41	3,798	47	3,706
35326 67	Magnetic separators (quantity represents number of drums) AND	1				
35326 69	Other mineral classifying, flotation, separating, concentrating, cleaning, clarifying, and related equipment (except parts)	4	695	4,061	848	4,293
35327 —	Crushing, pulverizing, and screening (except portable) machinery (except parts sold separately)	40	2,469	134,586	2,520	'131,846
	Crushers, stationary type, including skid mounted:					
	Gyratory:					
35327 10	Cone type AND	8				
35327 12	Other	2	138	30,878	176	34,834
35327 13	Impact	16	284	16,427	329	^b 17,854
35327 17	Jaw	10	76	8,011	^a 83	9,777

See footnotes at end of table.

Table 7. **MANUFACTURERS' SHIPMENTS OF MINING MACHINERY AND MINERAL PROCESSING EQUIPMENT, BY TYPE: 1992 AND 1991—Continued**

[Quantity in units except as specified; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Quantity	Value	Quantity	Value
35327 —	Mining machinery and mineral processing equipment—Cont.					
	Crushing, pulverizing, and screening (except portable) machinery (except parts sold separately)—Cont.					
	Crushers, stationary type, including skid—Cont.					
35327 19	Roll	5	43	3,450	58	4,653
35327 31	Grinding mills and pulverizers ⁵	4	37	28,931	37	23,388
	Screens, vibrating, stationary:					
35327 56	Horizontal	16	607	13,019	628	13,706
35327 57	Inclined	15	1,116	25,109	1,015	21,793
53527 58	Other, including trommell	7	^a 94	^a 4,574	^b 108	^b 2,429
35327 59	Other crushing, pulverizing, and screening machinery, not elsewhere classified	5	74	4,187	'86	'3,412
35328 —	Drills and other mining machinery, not elsewhere classified (except parts)	20	12,749	161,874	15,349	176,947
	Drills and breakers (rotary and percussion):					
35328 11	Rock drills, air and hydraulic powered ⁶	4	9,466	93,513	9,159	91,519
35328 15	Coal drills and core drills ⁷	3	251	15,546	308	15,246
35328 50	Roof bolters ⁸	5	151	26,845	179	30,768
35328 75	All other mining machinery and equipment (except parts sold separately) ⁹	12	2,881	25,970	5,703	39,414
3533A —	Portable drilling rigs and parts	23	(X)	254,988	(X)	262,306
	Portable drilling rigs with pull-back capacity (water well mineral exploration, shallow oil, and gas):					
3533A 11	Cable tool (all sizes)	1	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
	Rotary, trailer and truck mounted with pull-back capacity:					
3533A 21	Up to 14,999 lbs.	5	95	5,288	113	8,220
3533A 23	15,000 to 29,999 lbs.	6	73	18,190	87	20,578
3533A 25	30,000 to 59,999 lbs.	5	54	16,219	52	15,699
3533A 27	60,000 to 74,999 lbs. AND	2				
3533A 29	75,000 lbs. and over.	1	30	11,887	47	20,931
	Blasthole drills, rotary:					
3533A 31	Truck mounted ¹¹	3	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)
	Track mounted:					
3533A 36	Up to 59,999 lbs. ¹²	6	113	34,949	'138	39,313
3533A 39	60,000 lbs. and over	5	55	54,460	42	40,980
3533A 40	Construction drills ¹³	8	346	18,701	309	18,707
3533A 49	Other portable drilling rigs, including workover (service) rigs ¹⁰	6	940	12,844	'679	16,211
3533A 78	Parts for portable drilling rigs	18	(X)	82,450	(X)	'81,667
35355 pt.	Related mining machinery and equipment	13	(X)	81,276	(X)	82,878
	Underground conveyors, mine (quantity represents number of drives) ¹⁴	5	(X)	75,280	(X)	77,581
35363 15	Mine shaft and slope wire rope hoists; drum or friction electric or hydraulic, excluding tuggers, sheaves, skips, cages, and buckets AND	3				
37431 60	Locomotives, underground mine ¹⁵	4	(X)	5,996	(X)	5,297

Note: The percent of estimation of each item is indicated as follows: ^a10 to 25 percent of this item is estimated. ^b26 to 50 percent of this item is estimated.

- Represents zero. pt. Part. ^cRevised by 5 percent or more from previously published figures. (X) Not applicable.

¹Product code 35325 11 combines product codes 35325 16 and 35325 18.

²Product code 35325 41 combines product codes 35325 42 and 35325 43.

³Product code 35325 56 combines product codes 35325 57 and 35325 59.

⁴Product code 35325 70 combines product codes 35325 72, 35325 73, 35325 76, and 35325 78.

⁵Product code 35327 31 combines product codes 35327 33, 35327 37, and 35327 41.

⁶Product code 35328 11 combines product codes 35328 01, 35328 02, 35328 05, 35328 08, 35328 09, and 35328 10.

⁷Product code 35328 15 combines product codes 35328 06 and 35328 07.

⁸Product code 35328 50 combines product codes 35328 52 and 35328 53.

⁹Product code 35328 75 combines product codes 35328 70 and 35328 80.

¹⁰The data for product codes 3533A 11, 3533A 31, 3533A 33, 3533A 35, and 35325 49 are combined to avoid disclosing figures for individual companies.

¹¹Product code 3533A 31 includes product codes 3533A 31, 3533A 33, and 3533A 35.

¹²Product code 3533A 36 combines product codes 3533A 37 and 3533A 38.

¹³Product code 3533A 40 combines product codes 3533A 41 and 3533A 43.

¹⁴Product code 35355 pt. combines product codes 35355 71, 35355 72, 35355 73, 35355 74, 35355 75, and 35355 77.

¹⁵Product code 37431 60 combines product codes 37431 63, 37431 64, and 37431 66.

Table 8. **SHIPMENTS, EXPORTS, AND IMPORTS OF SELECTED MINING MACHINERY AND MINERAL PROCESSING EQUIPMENT: 1992 AND 1991**

[Value in thousands of dollars]

Product description ¹	Manufacturers' shipments (value f.o.b. plant)	Exports of domestic merchandise ^{1 2} (value at port)	Value of imports for consumption ^{1 3 4}
1992			
Portable crushing plants and stationary grinding mills and pulverizers	72,968	62,015	15,948
Sorting, screening, separating or washing machines	113,762	35,831	21,010
Rock breaking machines, coal or rock cutters and tunneling machinery . .	201,383	123,111	80,252
Underground mine loader machines.	73,398	577	-
Mine wagon pushers, locomotive or wagon tracers, wagon tippers, and similar railway wagon handling equipment	42,837	20,004	-
Stationary crushing machines	58,766	38,067	9,768
Pneumatic hand-held rotary rock drills.	(D)	2,686	5,591
1991			
Portable crushing plants and stationary grinding mills and pulverizers	66,327	20,004	10,066
Sorting, screening, separating or washing machines	102,879	38,067	36,410
Rock breaking machines, coal or rock cutters and tunneling machinery . .	259,352	50,064	64,088
Underground mine loader machines.	72,584	1,733	211
Mine wagon pushers, locomotive or wagon tracers, wagon tippers, and similar railway wagon handling equipment	78,160	2,036	421
Stationary crushing machines	67,118	35,885	11,041
Pneumatic hand-held rotary rock drills.	(D)	(NA)	(NA)

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available.

¹For comparison of SIC codes with Schedule B export numbers and import numbers, see appendix B.²Source: Bureau of the Census report FT 446, *U.S. Exports*.³Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.⁴This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus U.S. import duties.**HISTORICAL NOTE**

Data on mining machinery and equipment have been collected by the Bureau of the Census since 1961. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Mary Ellickson, 301-763-7862 or Michael Yamaner, 301-763-7866.

10.4 INTERNAL COMBUSTION ENGINES

INTRODUCTION

These data cover manufacturers of internal combustion engines in the United States, except outboard, aircraft, military tank, and non-diesel automotive engines.

The statistics were collected by mail on Bureau of the Census annual Form MA35L, Internal Combustion Engines. The survey panel includes all known domestic manufacturers of the specified types of internal combustion engines, approximately 50 companies.

SUMMARY OF FINDINGS

In 1992, a total of 18,927,703 internal combustion engines (except outboard, nondiesel automotive and aircraft) were shipped or produced and incorporated at the same plant, representing a 13-percent increase from the 16,791,296 produced in 1991. Gasoline or gas-gasoline engines totaled 18,298,632 in 1992, 13 percent above the figure of 16,219,592 for 1991. The number of nonautomotive diesel and dual-fuel engines produced in 1992 amounted to 177,266, a 4-percent decrease from the 184,245 reported in 1991. There were 451,102 automotive diesel engines produced in 1992, 17 percent more than the 383,110 produced in 1991. Production of gas engines (LPG and natural) was 4,171 in 1992, 4 percent less than the 4,349 produced in 1991.

EXPLANATION OF TERMS

Total Number of Engines Produced. Represents all production of engines for sale to other companies, for transfer to other plants of the same company or for the incorporation into other products produced at the plant.

Shipments to Distributors and Other Companies. Represents all shipments to affiliated and nonaffiliated distributors, plus all other shipments to nonaffiliated companies.

Interplant Transfers. Represents the number and value of engines transferred to other plants of the reporting company for incorporation into machinery or equipment in those plants. Shipments to distributors (whether affiliated with the company or not affiliated) are excluded. Transfers to other plants of the same company are reported at market value.

Produced and Incorporated. Represents engines produced and incorporated into other products in the same plant, such as construction and farm machinery (including tractors), engine-driven generator sets, and other products incorporating an engine manufactured in the same plant.

Horsepower. A unit for measuring the power of motors or engines, equal to 746 watts or to a rate of 33,000 foot-pounds per minute (the force required to raise 33,000 pounds at the rate of 1 foot per minute).

Piston Displacement. The volume (measured in cubic inches) displaced by a stroke of a piston (one cubic inch is approximately 16.387 cubic centimeters).

End Application. The end application or use for which the engine was destined. Engines may not be used ultimately for the specific application intended or supposed by the producer.

Table 9. INTERNAL COMBUSTION ENGINES, BY TYPE OF ENGINE: 1992 AND 1991

[Engines and quantity in units; value in thousands of dollars]

Product description	Engines produced ¹	Total shipments and interplant transfers		Shipment to other companies		Interplant transfers		Engines produced and incorporated ²
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	
1992								
Total.....	18,927,703	(D)	6,383,036	11,691,876	5,264,786	(D)	1,130,636	5,408,191
Gasoline (except outboard, aircraft, and automotive).....	18,298,632	11,759,911	1,601,604	11,235,257	1,431,066	524,654	170,538	(D)
Nonautomotive diesel (except aircraft) ..	177,226	161,181	1,438,896	125,147	1,138,811	36,034	300,085	16,337
Automotive diesel	447,674	451,102	3,172,501	327,531	2,511,588	122,953	660,013	-
Natural gas and liquefied petroleum gas.....	4,171	(D)	170,035	3,941	183,321	(D)	(³)	(D)
1991								
Total.....	16,791,296	(D)	5,469,070	(D)	4,472,344	(D)	996,726	5,477,981
Gasoline (except outboard, aircraft, and automotive).....	16,219,592	(D)	1,416,437	(D)	1,268,878	(D)	147,559	(D)
Nonautomotive diesel (except aircraft) ..	184,245	165,503	1,496,891	123,471	1,118,274	42,030	378,617	18,742
Automotive diesel	383,110	383,110	2,392,239	288,261	1,921,689	94,879	470,550	-
Natural gas and liquefied petroleum gas.....	4,349	(D)	163,503	4,015	163,503	(D)	(³)	(D)

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. ^rRevised by 5 percent or more from previously published figures.

¹Represents total number of engines shipped or produced and incorporated into products at the same establishment.

²Represents engines produced and incorporated (in the same plant) into products such as construction machinery, farm machinery, tractors, engine-generator sets, and other products.

³Data for gas engines shipped as interplant transfers have been included with shipments to other companies to avoid disclosing figures for individual companies.

Table 10. GASOLINE ENGINES, BY HORSEPOWER RATING: 1992 AND 1991

[Engines and quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	Engines produced ¹	Total shipments and interplant transfers		Shipment to other companies		Interplant transfers		Engines produced and incorporated ²
				Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	
1992										
35191	Gasoline engines	18	18,298,632	(D)	1,601,604	(D)	1,431,066	(D)	170,538	(D)
35191 01	Under 11 hp.....	12	16,447,898	(D)	(³)	(D)	(³)	(D)	(³)	(D)
37191 02	11 to under 21 hp...	4	1,645,937	(D)	³ 1,601,604	1,579,985	³ 1,431,066	(D)	³ 170,538	(D)
37191 03	21 to under 61 hp...	5	33,224	(D)	(³)	(D)	(³)	(D)	(³)	(D)
35191 07	61 hp and over	5	171,573	(D)	(³)	(D)	(³)	(D)	(³)	-
1991										
35191	Gasoline engines	21	16,219,592	(D)	1,416,437	1,362,977	1,268,878	(D)	147,559	(D)
35191 01	Under 11 hp.....	14	^r 14,637,891	(D)	(³)	(D)	(³)	(D)	(³)	(D)
37191 02	11 to under 21 hp...	5	1,403,691	(D)	³ ^r 1,416,437	1,353,652	³ ^r 1,268,878	(D)	³ 147,559	(D)
37191 03	21 to under 61 hp...	7	34,038	(D)	(³)	9,325	(³)	(D)	(³)	(D)
35191 07	61 hp and over	6	143,972	(D)	(³)	(D)	(³)	(D)	(³)	-

Note: Horsepower is defined as maximum published horsepower rating at maximum recommended revolutions per minute (r/min).

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. ^rRevised by 5 percent or more from previously published figures.

¹Represents total number of engines shipped or produced and incorporated into products at the same establishment.

²Represents engines produced and incorporated (in the same plant) into products such as construction machinery, farm machinery, tractors, engine-generator sets, and other products.

³Product codes are combined to avoid disclosing figures for individual companies.

Table 11. **NONAUTOMOTIVE DIESEL ENGINES, BY HORSEPOWER RATING: 1992 AND 1991**

[Engines and quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	Engines produced ¹	Total shipments and interplant transfers		Shipment to other companies		Interplant transfers		Engines produced and incorporated ²
				Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	
1992										
35193	Nonautomotive diesel engines ..	12	178,572	161,181	1,433,896	125,134	1,133,738	36,501	312,095	16,337
35193 31	Under 101 hp	8	19,209	(³)	(³)	14,346	48,161	(³)	(³)	(³)
35193 33	101 to under 151 hp	6	47,448	³ 122,540	³ 559,601	(⁴)	(⁴)	³ 26,119	³ 162,285	³ 9,608
35193 35	151 to under 176 hp	5	23,944	(³)	(³)	⁴ 82,059	⁴ 349,047	(³)	(³)	(³)
35193 37	176 to under 251 hp	5	43,164	(³)	(³)	(⁴)	(⁴)	(³)	(³)	(³)
35193 39	251 to under 301 hp	4	11,811	(³)	(³)	4,989	56,250	(³)	(³)	(³)
35193 41	301 to under 401 hp	5	9,023	(³)	(³)	7,239	86,072	(³)	(³)	-
35193 43	401 to under 451 hp	4	4,860	(³)	(³)	4,266	69,576	(³)	(³)	-
35193 45	451 to under 601 hp	3	7,882	(³)	(³)	5,962	153,676	(³)	(³)	(³)
35193 47	601 to under 701 hp	3	3,720	⁵ 38,641	⁵ 874,295	2,298	73,897	⁵ 10,382	⁵ 149,810	⁵ 6,729
35193 49	701 to under 801 hp	3	(⁶)	(³)	(³)	(³)	(³)	(³)	(³)	(³)
35193 51	801 to under 1,501 hp	5	⁶ 5,270	(³)	(³)	⁶ 3,398	⁶ 147,241	(³)	(³)	(³)
35193 28	1,501 hp and over	7	2,241	(³)	(³)	577	149,818	(³)	(³)	(³)
1991										
35193	Nonautomotive diesel engines ..	12	184,245	165,503	1,496,891	123,471	1,118,274	42,032	378,617	18,742
35193 31	Under 101 hp	8	18,387	(³)	(³)	11,843	38,751	(³)	(³)	(³)
35193 33	101 to under 151 hp	5	42,157	³ 124,971	³ 591,708	(⁶)	(⁴)	³ 30,527	³ 197,912	³ 10,859
35193 35	151 to under 176 hp	5	26,960	(³)	(³)	⁴ 82,601	⁴ 355,045	(³)	(³)	(³)
35193 37	176 to under 251 hp	6	48,326	(³)	(³)	(⁶)	(⁶)	(³)	(³)	(³)
35193 39	251 to under 301 hp	4	13,634	(³)	(³)	5,093	54,627	(³)	(³)	(³)
35193 41	301 to under 401 hp	5	9,721	(³)	(³)	7,618	90,377	(³)	(³)	(³)
35193 43	401 to under 451 hp	3	4,880	(³)	(³)	4,518	67,705	(³)	(³)	(³)
35193 45	451 to under 601 hp	3	8,690	(³)	(³)	5,822	140,306	(³)	(³)	(³)
35193 47	601 to under 701 hp	3	3,766	⁵ 38,641	⁵ 874,295	2,220	73,593	⁵ 11,505	⁵ 180,705	⁵ 7,883
35193 49	701 to under 801 hp	5	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)
35193 51	801 to under 1,501 hp	7	⁶ 5,322	(³)	(³)	⁶ 3,115	⁶ 146,175	(³)	(³)	(³)
35193 28	1,501 hp and over	7	2,402	(³)	(³)	⁶ 641	⁶ 151,695	(³)	(³)	(³)

Note: Horsepower is defined as maximum published horsepower rating at maximum recommended revolutions per minute (r/min).

- Represents zero. ¹Revised by 5 percent or more from previously published figures.¹Represents total number of engines shipped or produced and incorporated into products at the same establishments.²Represents engines produced and incorporated (in the same plant) into products such as construction machinery, farm machinery, tractors, engine-generator sets, and other products.³Product codes 35193 31, 35193 33, 35193 35 and 35193 37 have been combined to avoid disclosing figures for individual companies.⁴Product codes 35193 33, 35193 35, and 35193 37 have been combined to avoid disclosing figures for individual companies.⁵Product codes 35193 39, 35193 41, 35193 43, 35193 45, 35193 47, 35193 49, 35193 51, and 35193 28 have been combined to avoid disclosing figures for individual companies.⁶Product codes 35193 49 and 35193 51 have been combined to avoid disclosing figures for individual companies.

Table 12. **AUTOMOTIVE DIESEL ENGINES, BY HORSEPOWER RATING: 1992 AND 1991**

[Engines in units; value in thousands of dollars]

Product code	Product description	Number of companies	1992		1991	
			Engines ¹	Value	Engines ¹	Value
35194	Automotive diesel engines	8	447,674	3,107,743	383,110	2,392,239
35194 11	Under 226 hp	7	281,820	1,081,020	260,506	976,022
35194 14	226 to under 251 hp	5	4,401	30,464	13,399	67,297
35194 15	251 hp and over	4	161,453	1,996,259	109,205	1,348,920

¹Represents total number of engines shipped.Table 13. **GAS ENGINES, EXCEPT AUTOMOTIVE, BY HORSEPOWER RATING: 1992 AND 1991**

[Engines and quantity in units; value in thousands of dollars]

Product code	Product description	Number of companies	Engines produced ¹	Total shipments including interplant transfers		Engines produced and incorporated ²
				Quantity	Value f.o.b. plant	
	1992					
35196	Natural gas and liquefied petroleum gas engines..	8	4,171	(D)	170,035	(D)
35196 11	Under 501 hp.....	7	3183	(D)	25,376	(D)
35196 12	501 hp and over	4	988	(D)	144,659	(D)
	1991					
35196	Natural gas and liquefied petroleum gas engines..	8	4,349	(D)	151,628	(D)
35196 11	Under 501 hp.....	7	3,352	(D)	28,375	(D)
35196 12	501 hp and over	4	997	(D)	123,253	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

¹Represents total number of engines shipped or produced and incorporated into products at the same establishment.²Represents engines produced and incorporated (in the same plant) into products such as construction machinery, farm machinery, tractors, engine-generator sets, and other products.Table 14. **ENGINES PRODUCED, BY PISTON DISPLACEMENT AND FUEL SYSTEM: 1992 AND 1991**

Piston displacement	1992	1991
Total	18,923,532	16,786,947
Gasoline, total	18,298,632	16,219,592
Under 251 cc	16,136,729	14,344,001
251 and over	2,161,903	1,875,591
Nonautomotive diesel, total	177,226	184,245
Under 251 cc	4,759	5,295
251 to 3,700 cc	62,327	63,188
3,701 and over	110,140	115,762
Automotive, total	447,674	383,110
Under 3,700 cc	257,671	217,506
3,701 and over cc	190,003	165,604

cc Cubic centimeters.

Table 15. **ENGINE PRODUCED, EXCEPT OUTBOARD, AUTOMOTIVE, AND AIRCRAFT, BY TYPE OF ENGINE AND END APPLICATION: 1992 AND 1991**

End application	Gasoline engines		Nonautomotive diesel engines	
	1992	1991	1992	1991
Total	18,298,632	16,219,592	177,226	184,245
Oil field and petroleum-related generating and stationary equipment	(D)	(D)	742	(D)
Other generator sets	(D)	(D)	26,595	31,583
Irrigation	5,174	3,726	(D)	(D)
Chain saws	1,638,233	1,447,290	-	-
Off-highway mobile construction equipment	(D)	(D)	76,532	69,514
Marine (except outboard)	(D)	(D)	8,528	9,142
Railroad, motive power type	-	(D)	(D)	(D)
Agricultural vehicular	(D)	(D)	(D)	(D)
Garden tractors	(D)	(D)	-	-
Lawn, home, and recreational equipment	12,758,786	11,334,824	-	-
Other general industrial	(D)	(D)	26,891	26,162

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

Table 16. **PRODUCTION, EXPORTS, AND IMPORTS OF INTERNAL COMBUSTION ENGINES: 1992 AND 1991**

[Quantity in units; value in thousands of dollars]

Product code	Product description	Manufacturers' production		Exports of domestic merchandise ²		Imports for consumption ³	
		Quantity	Value of shipments f.o.b. plant ¹	Quantity	Value at port	Quantity	Value
	1992						
	Total	18,927,703	5,105,321	1,806,858	1,591,869	1,901,451	950,539
35194	Automotive diesel engines	447,674	3,172,501	90,547	596,673	8,876	28,952
35193	Nonautomotive diesel engines	177,226	161,181	48,750	667,490	227,218	606,756
35191	Gasoline engines	18,298,632	1,601,604	1,667,047	309,246	1,634,895	303,091
35196	Gas and liquefied petroleum gas engines ...	4,171	170,035	514	18,460	33,462	11,740
	1991						
	Total	16,791,296	5,469,070	1,517,229	1,292,234	1,164,903	866,337
35194	Automotive diesel engines	383,110	2,392,239	61,245	334,373	37,711	212,625
35193	Nonautomotive diesel engines	184,245	1,496,891	46,820	668,264	171,945	431,558
35191	Gasoline engines	16,219,592	1,416,437	1,408,599	259,860	(*)	(*)
35196	Gas and liquefied petroleum gas engines ...	4,349	163,503	565	29,737	955,247	222,144

¹Value of shipments f.o.b. plant of production; quantities shipped as engines, including interplant transfers.

²Source: Bureau of the Census report EM 545, *U.S. Exports*.

³Source: Bureau of the Census reports IM 145, *U.S. General Imports*. These figures include both import value and duty value.

⁴Data for product codes 35191 and 35196 for "Imports for consumption" were combined to avoid disclosing figures for individual companies.

HISTORICAL NOTE

Data on internal combustion engines have been collected by the Bureau of the Census since 1943. Historical data may be obtained from Current Industry Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Annette Ralston, 301-763-7871 or Lynn Sizemore, 301-763-5547.

10.5 METALWORKING MACHINERY

INTRODUCTION

These data cover all companies engaged in the manufacture of industrial type metal cutting and metal forming types of metalworking machinery, including numerical control types.

The statistics were collected by mail on Bureau of the Census quarterly Form MQ35W, Metalworking Machinery. The survey panel includes all known manufactures of metal cutting and metal forming machinery. Approximately 475 companies are included.

SUMMARY OF FINDINGS

Shipments of metalworking machinery during 1992 totaled \$3,073.9 million, a 3-percent decrease from the \$3,171.7 million shipments for 1991. Exports during the year were valued at \$471 million, a 7-percent increase from exports valued at \$462 million during 1991. The value of unfilled orders on December 31, 1992 totaled \$1,715 million. The December 31, 1991 unfilled orders were valued at \$1,947 million.

Shipments of metal cutting type machine tools in 1992 totaled \$1,999.6 million, a 7-percent decrease from the \$2,138.7 million shipped during 1991. For 1992, shipments of lathes accounted for \$259 million; grinding and polishing machines, \$335 million; milling machines, \$210 million; and boring and drilling machines \$135 million. The corresponding figures for 1991 were: lathes, \$317 million; grinding and polishing machines, \$379 million; milling machines, \$201 million; and boring and drilling machines, \$115 million.

EXPLANATION OF TERMS

Exports. Includes both shipments for direct export and shipments to agents or exporters for shipment to foreign countries.

Metal-Cutting Type Machine Tools. These are defined as new, industrial type, power-driven, complete machine tools, not supported in the hands of an operator when in use. They are used for removing metal in the form of chips, turnings, and boring. Also included are honing machines, lapping machines, and grinders. Excluded are machine tools designed primarily for home workshops, laboratories, garages, and service shops. These are small, low-priced

machine tools of light construction. Also excluded are rolling mill machinery, power-driven hand tools, wood working machinery, and rebuilt machinery.

Metal-Forming Type Machine Tools. These are defined as new, industrial type, power-driven, complete machine tools, not supported in the hands of an operator when in use. They are used to press, forge, emboss, hammer, extrude, blank, spin, shear, or bend metal into shape.

Numerically Controlled Machines, By Type:

Positioning. Machines equipped with positioning numerical control systems activated by direct data input (DNC), e.g., punched tape, punched cards, magnetic tape, cassette, or manual data input (MDI). Included in this group are all machines that have been equipped with control systems in which point-to-point positioning and cutting or forming (regardless of the number of movement "axes" or auxiliary functions) are controlled automatically by means of numerical programs inserted into the systems. If a machine has been equipped with a control system that permits positioning and continuous path operations, it is classified as continuous path.

Continuous Path or Computer Numerical Control. Machines equipped with continuous path numerical program control systems activated by direct data input (CNC), e.g., punched tape, punched cards, magnetic tape, cassette, or manual data input (MDI). Included in this group are all machines equipped with control systems in which, in addition to point-to-point positioning, the path of cutting is automatically controlled by means of numerical programs inserted into the systems. If a machine has been equipped with a control system that permits positioning and continuous path operations, it is classified as continuous path.

Digital Readout Systems Including Dial or Plugboard. Machines equipped with digital readout systems or dial or plugboard type of prerecorded motion program control systems. Included in this group are all machines equipped with control systems in which positioning or continuous path are automatically commanded by numerical programs fed into the system by an operator through dials, plugs, switches, or any other numerical method.

Table 17. VALUE OF SHIPMENTS INCLUDING EXPORTS OF METALWORKING MACHINERY, BY CLASS OF PRODUCT: 1983 TO 1992

[Thousands of dollars]

Product code	Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
	Metalworking machinery	3,073,862	3,171,748	3,426,081	3,514,224	2,858,174	2,668,685	2,709,800	2,682,201	2,426,382	2,144,849
3541D ¹	Metal cutting type	1,999,668	2,138,713	2,371,266	2,428,520	1,734,781	1,780,737	1,911,628	1,877,289	1,688,296	1,564,204
	Boring machines	97,975	77,655	(²)	(²)	(²)	(²)	83,916	85,066	96,096	95,778
	Drilling machines ²	37,472	37,374	184,118	183,151	133,860	154,665	40,040	43,805	37,234	41,083
35413	Gear cutting machines	79,600	115,226	102,678	97,304	48,897	59,608	57,313	51,791	42,362	35,767
35414	Grinding and polishing machines (except gear-tooth grinding, lapping, polishing, buffing machines)	335,121	378,946	433,574	419,754	359,821	384,711	419,659	414,962	335,571	280,822
35415	Lathes	258,885	317,087	355,632	343,223	282,480	283,505	281,973	318,693	307,644	320,854
35416	Milling machines	210,403	201,137	214,254	206,248	184,482	206,910	169,221	160,639	179,916	146,455
3541A ³	Machining centers (multi-function numerically controlled machines)	377,941	361,799	436,999	442,226	334,469	217,839	213,405	214,708	213,200	182,943
3541B ³	Station type machines	434,705	450,366	502,066	562,887	225,376	299,570	517,736	406,119	311,941	274,035
3541C ³	Other metal cutting machine tools (except those designed primarily for home workshops, laboratories, etc.)	166,535	195,654	141,945	173,727	165,396	173,929	148,365	161,506	164,332	186,467
35421 pt.	Metal forming type	1,074,194	1,033,035	1,064,815	1,085,704	1,123,393	887,948	798,172	804,912	738,086	580,645
	Punching and shearing machines	172,872	180,756	200,050	200,104	167,347	141,965	122,253	144,047	139,169	120,053
35421 pt.	Bending and forming machines	270,044	204,357	229,271	217,891	204,939	173,380	169,853	178,407	177,935	138,636
35422	Presses (except forging)	288,248	297,889	319,436	316,549	356,528	265,630	293,090	254,029	230,062	160,831
35423 pt.	Forging machines	(⁴)	(⁴)	73,947	58,478	(⁴)	42,735	36,715	35,367	29,002	48,044
35423 pt.	Other metal forming type machines ⁴	342,830	350,033	274,985	292,682	394,579	264,238	176,261	193,062	161,918	113,081

pt. Part. ¹Revised by 5 percent or more from previously published figures.¹Prior to the 1987 Census of Manufactures, the boring machine product code was identified as 35411 and the drilling machine product code was identified as 35412.²For 1987 through 1990, "Boring machines" were combined with "Drilling machines."³Beginning with the 1982 Census of Manufactures, product class 35417 became 3541A, 3541B, and 3541C.⁴For 1988, 1991, and 1992, "Forging machines" were combined with "Other metal forming type machines."

Table 18. TOTAL SHIPMENTS AND UNFILLED ORDERS, AND EXPORTS: 1992 AND 1991

[Quantity in units; value in thousands of dollars]

Product code	Product description	Company count	1992			1991		
			Total shipments		Unfilled orders (value)	Total shipments		Unfilled orders (value)
			Number of units	Value		Number of units	Value	
	Metalworking machinery.....	(X)	121,533	3,073,862	1,715,585	113,707	3,171,748	'1,946,818
	Metal cutting type machine tools valued over \$3,025 ...	(X)	19,775	1,963,740	1,148,123	21,631	2,109,145	1,375,989
	Metal cutting type machine tools valued at \$3,025 and under ^{1 2}	(X)	62,573	35,928	1,666	55,999	29,568	7,175
3541D 00	Boring and drilling machines	47	7,542	135,447	68,847	7,603	'115,029	'71,825
3541D 10	All boring machines valued under \$3,025 each.	1	(³)	(³)	(³)	(³)	(³)	(³)
3541D 16	Boring machines valued at \$3,025 each or more: Horizontal boring, drilling, and milling machines, including floor, table and rail mounted.	6	20	15,883	10,103	'24	'9,523	18,444
3541D 40	Precision boring machines, including horizontal and vertical boring machines.	8	546	76,706	35,602	466	62,613	29,627
3541D 46	Jig boring and all other boring machines (except boring lathes) ³	2	34	5,386	4,639	34	5,519	5,504
3541D 05	All drilling machines valued under \$3,025 each ...	15	5,692	7,210	277	5,147	6,542	1,150
3541D 15	Drilling machines valued at \$3,025 each or more: Vertical upright drilling machines, including plain upright and heavy duty.	6	725	4,105	999	1,405	4,764	945
3541D 25	Radial drilling machines, including plain and universal AND	2						
3541D 35	Deep hole drilling machines.	3	57	6,646	3,333	51	7,016	4,554
3541D 45	Multiple spindle drilling machines: Adjustable joint and fixed center types.	6	114	6,508	2,120	90	3,259	1,510
3541D 55	All other automatic multiple spindle drilling machines.	7	139	8,390	9,691	211	11,963	8,107
3541D 65	All other drilling machines n.e.c.	7	215	4,613	2,083	175	3,830	1,984
35413 00	Gear cutting machines, including gear hobber, shapers, teeth finishing, bevel gear generators, and all other gear cutting machines.	8	180	79,600	45,920	244	115,226	75,430
35414 00	Grinding, polishing, buffing, honing, and lapping machines	84	54,585	335,121	206,881	49,187	'378,946	242,854
35414 10	All grinding, polishing, buffing, honing, and lapping machines valued under \$3,025 each.	21	49,902	16,608	1,071	43,488	12,975	532
	All grinding, polishing, buffing, honing, and lapping machines valued at \$3,025 each or more: External cylindrical grinding machines:							
35414 11	Plain, including angular wheel types AND	3						
35414 13	Universal	2	84	21,541	16,414	117	40,059	31,395
35414 14	Roll, chucking, centerless, and other cylindrical grinding machines	9	382	84,474	70,093	468	'58,359	86,520
35414 33	Surface grinding machines, rotary table type, horizontal and vertical.	7	199	16,299	7,881	255	17,270	12,770
35414 34	Surface grinding machines, reciprocating table type, including face grinders, horizontal and vertical AND	8						
35414 37	Surface grinding machines, reciprocating table type, including face grinders, hand surface type.	2	805	12,718	5,896	773	15,201	4,293
35414 42	All other disc grinders, including bench, floor, snag double spindle grinders, and abrasive belt grinders	8	264	19,293	11,792	248	'23,356	18,125
35414 52	Tool and cutter grinding machines.	14	793	42,057	13,807	513	54,375	12,064
35414 55	All other grinding machines, n.e.c., including internal cylindrical type, planer type, and thread grinding machines	17	687	45,073	18,592	1,193	'64,750	12,786
35414 75	Honing and lapping machines, internal, including combination bore, hone, and external.	4	651	29,406	20,630	803	34,597	24,832
35414 79	Flat surface lapping machines (except gear lapping)	5	365	11,635	6,687	334	20,985	3,600
35414 84	All other honing and lapping machines or polishing and buffing machines, including speed lathes and multistation type.	22	453	36,017	34,018	995	37,019	35,937

See footnotes at end of table.

Table 18. TOTAL SHIPMENTS AND UNFILLED ORDERS, AND EXPORTS: 1992 AND 1991—Continued

[Quantity in units; value in thousands of dollars]

Product code	Product description	Company count	1992			1991		
			Total shipments		Unfilled orders (value)	Total shipments		Unfilled orders (value)
			Number of units	Value		Number of units	Value	
	Metal cutting type machine tools—Cont.							
35415 00	Lathes	(X)	2,409	258,885	129,023	2,590	317,087	125,495
	Numerically controlled:							
	Horizontal	14	1,629	172,053	63,315	1,703	206,278	62,980
35415 15	Multiple spindle NC turning machine	2	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
	Single spindle NC turning machines:							
35415 16	Small	8	1,441	133,405	23,449	1,421	133,786	19,498
35415 17	Medium	6	160	27,275	17,462	202	40,853	16,725
35415 18	Large ⁴	4	28	11,373	22,404	80	31,639	26,757
35415 22	Vertical	5	87	48,619	49,335	95	63,100	42,659
	Nonnumerically controlled turning machines	17	693	38,213	16,373	'792	'47,709	'19,856
35415 09	All lathes (turning machines) valued under \$3,025 each	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
	All lathes (turning machines) valued at \$3,025 each or more:							
35415 23	Engine or toolroom lathes, all types	7	346	11,114	5,205	'268	'12,788	'5,156
	Automatic lathes:							
35415 83	Single spindle	1	-	-	(⁵)	(⁵)	(⁵)	-
	Multiple spindle:							
35415 88	Bar (screw) machines AND	3						
35415 67	Chucking machines	2	82	15,851	6,888	146	26,317	7,288
35415 57	All other horizontal turning machines, including turret lathes and automatic between center lathes ⁴ AND	4						
35415 86	All other vertical turning machines	3	265	11,248	4,285	378	8,604	7,412
35416 00	Milling machines	19	2,581	210,403	119,237	'2,772	'201,137	206,083
35416 09	All milling machines valued under \$3,025 each	2	(²)	(²)	(²)	(²)	(²)	(²)
	All milling machines valued at \$3,025 or more:							
35416 23	General-purpose, knee milling machines all types AND	4						
35416 32	Automatic single spindle, multiple spindle and special-purpose machines AND	2						
35416 53	Profile machines and duplicators AND	3						
35416 62	All other milling machines, n.e.c., including planer type and thread milling machines ⁶	8	2,581	210,403	119,237	2,792	201,137	206,083
3541A 00	Machining centers	16	2,676	377,941	143,451	2,316	361,799	193,179
	Drill, mill, and bore, vertical (automatic tool change):							
3541A 05	Y-axis travel less than 20 inches	5	500	43,090	7,855	540	41,857	4,350
3541A 07	Y-axis travel 20 inches through 26 inches	6	869	77,010	9,945	729	70,544	7,866
3541A 09	Y-axis travel over 26 inches	7	254	36,431	10,642	243	42,370	9,537
	Drill, mill, and bore, horizontal (automatic tool change):							
3541A 11	Y-axis travel less than 27 inches	4	327	84,218	27,607	187	56,147	39,829
3541A 13	Y-axis travel 27 inches through 40 inches AND	3						
3541A 15	Y-axis travel over 40 inches	2	165	116,422	83,219	204	135,135	110,731
3541A 19	All other machining centers, including special machining centers, special adapting of standard machining centers, and machining centers with indexing turret	4	561	20,770	4,183	413	15,746	20,866
3541B 00	Station type machines	21	292	434,705	378,943	336	450,366	399,918
3541B 31	Dial or rotary, trunnion, and center column	9	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)
3541B 35	Transfer	11	117	213,873	191,883	82	248,794	199,569
3541B 37	Other station type, n.e.c. ⁶	4	175	220,832	187,060	254	201,572	200,349

See footnotes at end of table.

Table 18. TOTAL SHIPMENTS AND UNFILLED ORDERS, AND EXPORTS: 1992 AND 1991—Continued

[Quantity in units; value in thousands of dollars]

Product code	Product description	Company count	1992			1991		
			Total shipments		Unfilled orders (value)	Total shipments		Unfilled orders (value)
			Number of units	Value		Number of units	Value	
	Metal cutting type machine tools— Cont.							
3541C 00	Other metal cutting machine tools	63	11,656	166,535	59,565	12,109	'195,654	'63,253
3541C 41	Other metal cutting machine tools, n.e.c., valued under \$3,025	16	6,548	11,035	307	6,881	6,472	366
	Other metal cutting machine tools, n.e.c., valued at \$3,025 each or more:							
3541C 51	Broaching machines	5	59	10,833	5,878	185	12,380	8,268
	Sawing and cutoff machines:							
3541C 53	Power hack saws	1	(7)	(7)	(7)	(7)	(7)	(7)
3541C 55	Circular cutoff saws (cold)	4	127	5,844	1,793	221	10,394	1,706
3541C 59	Band saws	12	2,824	30,099	3,997	2,792	31,691	3,799
3541C 61	All other sawing and cutoff machines ⁷	11	746	19,395	9,063	624	'22,975	'8,012
3541C 64	Spark erosion, ultrasonic, and electrolytic machines all types	7	486	28,860	8,199	503	22,233	5,703
3541C 91	Miscellaneous metal cutting machine tools	21	866	60,469	30,328	903	'89,509	35,399
	Metal forming type machine tools valued over \$3,025 ..	(X)	21,165	1,056,236	563,632	16,515	1,013,800	569,285
	Metal forming type machine tools valued at \$3,025 and under	(X)	18,020	17,958	1,848	19,562	19,235	1,544
35421 00	Punching, shearing, bending, and forming machines ..	80	16,526	442,916	139,940	17,633	385,113	147,667
35421 08	All punching and shearing machines valued under \$3,025 each	13	2,114	2,795	280	2,583	3,269	144
	All punching and shearing machines valued at \$3,025 each or more:							
	Power operated only:							
35421 11	Punches, including combination punching and shearing machines	15	2,170	31,690	5,564	2,460	33,494	9,350
35421 16	Punching machines fixed position and two axes positioning table	4	325	58,819	9,078	338	57,808	9,771
	Plate shearing machines:							
35421 12	Mechanical	6	228	39,014	(⁸)	258	54,160	(⁸)
35421 14	Hydraulic ⁸	8	807	16,781	23,176	735	15,002	29,896
35421 19	Other power-operated punching and shearing machines	13	242	23,773	9,073	216	17,023	4,768
35421 33	All bending and forming machines, power operated, valued under \$3,025 each	9	4,891	5,346	846	5,620	5,711	547
	All bending and forming machines, power operated, valued at \$3,025 each or more:							
35421 34	Press brakes all types	7	598	37,089	7,566	597	37,323	9,726
35421 37	Bending rolls, sheet, and plate	10	606	25,773	7,235	477	17,858	8,530
35421 35	Bending rolls, angles, bars, shapes, and tubes ..	4	710	42,448	22,167	632	35,030	24,688
35421 43	Rotary bending and forming machines, including rotary head	11	1,498	34,511	19,016	1,631	23,926	11,121
35421 47	Ram and press bending machines	5	243	4,783	1,611	345	8,872	1,807
35421 49	Other bending and forming machines, including folders	23	2,094	120,094	34,328	1,741	75,637	37,319
35422 00	Presses (except forgings)	40	5,822	288,248	253,534	5,902	297,889	239,492
35422 01	All presses valued under \$3,025 each	5	3,663	3,239	133	3,763	3,476	142
	All presses valued at \$3,025 each or more:							
	Mechanical presses:							
	Open back inclinable, gap type:							
35422 12	50 tons and under	8	276	4,256	1,057	293	4,374	661
35422 02	51 tons to 120 tons AND	7						
35422 03	121 tons and over	3	154	50,639	24,164	145	9,153	2,626
	Vertical straight sided and arch frame single action:							
35422 16	Single point AND	2						
	Two point:							
35422 17	300 tons and under AND	3						
35422 18	301 tons and over	3	114	26,137	28,882	133	48,897	9,935
35422 45	Automatic presses, strip or coil field	6	306	55,171	39,082	283	41,877	39,067
35422 53	All other mechanical presses	7	84	85,818	111,471	65	96,463	124,301

See footnotes at end of table.

Table 18. TOTAL SHIPMENTS AND UNFILLED ORDERS, AND EXPORTS: 1992 AND 1991—Continued

[Quantity in units; value in thousands of dollars]

Product code	Product description	Company count	1992			1991		
			Total shipments		Unfilled orders (value)	Total shipments		Unfilled orders (value)
			Number of units	Value		Number of units	Value	
	Metal forming type machine tools—Cont. Presses (except forgings)—Cont. All presses valued at \$3,025 each or more—Cont.							
	Hydraulic presses:							
	Vertical single action, all tonnages:							
35422 56	Housing or straight side type AND	3						
35422 57	Column type (open rod)	5	83	21,963	27,941	124	41,672	25,691
	Gap or C-frame:							
35422 58	15 tons and under	6	325	3,536	862	388	4,146	417
35422 59	16 tons to 35 tons	4	81	5,607	3,414	65	2,376	2,709
35422 60	Over 35 tons	6	51	4,586	2,239	37	6,976	2,152
35422 92	Other hydraulic and pneumatic presses, including horizontal	11	685	27,296	14,289	606	38,479	31,791
35423 20	Forging machines, including forging presses and die stamping presses	6	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
35423 00	All other metal forming type machine tools	51	16,837	342,830	172,006	12,542	350,033	183,670
35423 97	All other metal forming type machine tools valued under \$3,025 each	3	7,352	6,378	589	7,596	6,779	711
	All other metal forming type machine tools valued at \$3,025 each or more:							
35423 43	Thread rolling machinery	5	88	11,153	2,749	360	22,576	5,178
35423 30	Metal container-making machinery	10	566	130,707	76,321	541	119,957	79,140
35423 55	Die casting machines all types	4	72	26,222	4,496	56	28,055	3,339
35423 49	Riveting machines	7	1,455	33,358	4,575	2,125	24,999	3,774
35423 93	All other metal forming type machine tools, n.e.c. ⁹	26	7,304	135,012	83,276	1,864	147,667	91,528

- Represents zero. n.e.c. Not elsewhere classified. ¹Revised by 5 percent or more from previously published figures. (X) Not applicable.¹Data for "All lathes valued under \$3,025 each" are included in the total for "Metal cutting type machine tools valued under \$3,025."²Data for "All milling machines valued under \$3,025" are included in the total for "Metal cutting type machines under \$3,025."³Data for "Boring machines under \$3,025" are combined with product code 3541D 46, "Jig boring and all other boring machines."⁴Data for "Multiple-spindle NC turning machines" are included with "Large single spindle turning machines" to avoid disclosing individual company figures.⁵Data for 35415 83, "Single spindle automatic lathes" have been combined with 35415 57, "All other horizontal turning machines" to avoid disclosing individual company figures.⁶Data for 3541B 31, "Dial or rotary, trunnion and center column" station type machines have been combined with 3541B 37, "Other station type, n.e.c." to avoid disclosing individual company figures.⁷Data for 3541C 53, "Power hack saws" have been combined with 3541C 61, "All other sawing and cutoff machines" to avoid disclosing individual company figures.⁸Data for unfilled orders for 35421 12, "Plate shearing machines, mechanical" have been combined with unfilled orders for 35421 14, "Plate shearing machines, hydraulic" to avoid disclosing individual company figures.⁹Data for 35423 20, "Forging machines" have been combined with 35423 93, "All other metal forming type machine tools, n.e.c." to avoid disclosing individual company figures.

Table 19. TOTAL SHIPMENTS OF NUMERICALLY CONTROLLED MACHINES, AND EXPORTS: 1992 AND 1991

[Quantity in units; value in thousands of dollars]

Product description	1992			1991		
	Shipments of numerically controlled machines		Export shipments value	Shipments of numerically controlled machines		Export shipments value
	Quantity	Value		Quantity	Value	
Metalworking machinery ¹	8,478	1,380,322	471,297	12,428	1,307,862	462,096
Metal cutting type machine tools ²	6,888	1,217,307	235,165	9,640	962,325	214,324
Boring and drilling machines.....	194	59,137	(²)	(D)	(D)	(D)
Gear cutting machines.....	94	24,464	36,185	65	28,163	67,868
Grinding, polishing, buffing, and lapping machines.....	1,611	145,889	53,734	4,888	183,586	68,222
Valued under \$3,025 each AND						
Universal external cylindrical grinding machines AND						
Surface grinding machines, all types ...	1,505	135,373	38,043	4,778	162,196	59,917
Honing, lapping, polishing and buffing machines.....	106	10,516	15,691	110	21,390	8,305
Horizontal NC turning machines, valued at \$3,025 or more.....	1,629	172,053	29,499	1,703	206,278	25,180
Small single spindle NC turning machines.	1,441	133,405	(D)	1,421	133,786	(D)
Medium single spindle NC turning machines.....	160	27,275	(D)	202	40,853	(D)
Multiple spindle and large single spindle NC turning machines	28	11,373	(D)	80	31,639	(D)
Vertical NC turning machines, valued at \$3,025 or more.....	87	48,619	(²)	95	63,100	(²)
Nonnumerically controlled turning machines, valued at \$3,025 or more.....	(X)	(X)	2,131	(X)	(X)	3,095
Milling machines	369	179,730	23,035	603	169,055	32,977
Machining centers.....	2,115	357,171	34,114	2,399	374,719	51,678
Drill, mill and bore (manual tool change) ..	-	-	-	(D)	(D)	(D)
Drill, mill and bore, vertical (automatic tool change)	1,623	156,531	11,005	1,511	154,060	10,807
Y-axis travel less than 20 inches.....	500	43,090	(D)	540	41,733	(D)
Y-axis travel 20 inches through 26 inches	869	77,010	(D)	729	70,544	(D)
Y-axis travel over 26 inches	254	36,431	1,867	242	41,783	3,283
Drill, mill and bore, horizontal (automatic tool change)	492	200,640	23,109	391	191,282	37,258
Y-axis travel less than 27 inches.....	327	84,218	(D)	187	56,147	(D)
Y-axis travel 27 inches through 40 inches AND						
Y-axis travel over 40 inches	165	116,422	(D)	204	135,135	(D)
All other machining centers.....	(²)	(²)	(²)	(D)	(D)	(D)
Station type machines	(²)	(²)	(²)	(²)	(²)	(²)
Other metal cutting machine tools, n.e.c....	204	29,744	24,981	228	34,694	25,920
Metal forming type machine tools	1,590	163,015	236,132	2,375	141,788	247,772
Punching, shearing, bending, and forming machines ³	789	117,533	99,700	727	105,666	96,063
Punching and shearing machines	438	83,976	32,225	406	77,517	36,842
Valued under \$3,025 each	(X)	(X)	(³)	(X)	(X)	(³)
Valued at \$3,025 each or more	438	83,976	32,255	406	77,517	36,842
All bending and forming machines, power operated	351	33,557	(³)	321	28,149	57,849
Valued under \$3,025 each	(X)	(X)	692	(X)	(X)	(³)
Valued at \$3,025 each or more	351	33,557	66,605	321	28,149	57,849
Presses, except forging	86	23,893	23,920	79	15,618	35,746
Forging machines AND						
All other metal forming type machine tools ..	715	21,589	112,512	1,569	20,504	115,963

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. n.e.c. Not elsewhere classified.
(X) Not applicable.

¹Data for "Gear cutting machines" are excluded from the total for 1991 "Metalworking machinery" to avoid disclosing figures for individual companies.

²Data included in total, "Metal cutting type machine tools."

³Data included in total for "Punching, shearing, bending, and forming machines."

Table 20. **SHIPMENTS, EXPORTS, AND IMPORTS OF METALWORKING MACHINERY: 1992 AND 1991**

[Quantity in units; value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ^{1 2}		Imports for consumption ^{1 3}	
	Quantity	Value	Quantity	Value at port	Quantity	Value ⁴
1992						
Boring and drilling machines, excluding multifunction NC machines, machining centers:						
Boring machines:						
Valued under \$3,025 each	(D)	(D)	1,801	1,456	3,589	2,313
Valued at \$3,025 each or more	600	97,975	109	8,338	502	127,129
Drilling machines:						
Valued under \$3,025 each	5,692	7,210	1,005	715	147,126	18,617
Valued at \$3,025 each or more	1,250	30,262	853	17,333	714	34,626
Gear cutting machines	180	79,600	1,321	48,913	76	16,402
Grinding, polishing, buffing, honing, and lapping machinery (except gear tooth grinding, lapping, polishing, and buffing machines):						
Valued under \$3,025 each	49,902	16,608	8,139	3,250	722,150	28,207
Valued at \$3,025 each or more	4,683	318,513	3,373	125,966	5,418	215,781
Lathes (turning machines):						
Valued under \$3,025 each	(D)	(D)	2,821	2,051	8,811	10,451
Machines valued at \$3,025 each or more:						
Horizontal NC turning machines:						
Multiple spindle NC turning machines...	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
Small single spindle NC turning machines.....	1,441	133,405	102	11,774	1,939	146,839
Medium spindle and large single spindle NC turning machines.....	160	27,275	123	17,744	837	142,464
Vertical NC turning machines	28	11,373	27	6,715	132	26,526
Nonnumerically controlled turning machines:						
Horizontal spindle lathes	268	12,788	43	804	2,613	25,640
Single spindle automatic lathes	-	-	18	377	184	3,594
Multiple spindle automatic lathes.....	84	15,851	69	3,342	50	9,523
All other horizontal turning machines ...	(⁶)	(⁶)	252	3,952	281	6,741
Vertical turret lathes and vertical boring machines.....	(⁶)	(⁶)	27	6,715	88	19,683
All other vertical turning machines ⁶	265	11,248	146	8,890	400	18,666
Milling machines:						
Valued under \$3,025 each	(D)	(D)	4,586	6,486	7,578	9,395
Valued at \$3,025 each or more	2,947	211,125	431	45,255	2,820	65,854
Machining centers (multifunction NC machines):						
Drill, mill, and bore, vertical (automatic tool change):						
Y-axis travel less than 20 inches and 20 inches through 26 inches.....	1,369	120,100	65	8,762	1,968	169,168
Y-axis travel 26 inches and over	254	36,431	21	4,768	179	33,514
Drill, mill, and bore, horizontal (automatic tool change)	492	200,640	20	6,768	502	127,129
Other machining centers	561	20,770	185	20,553	41	44,574
Station type machines	292	434,705	326	115,529	125	61,640
Other metal cutting machine tools:						
Valued under \$3,025 each	6,548	11,035	21,028	8,062	145,141	26,659
Valued at \$3,025 each or more	5,092	177,570	3,781	113,153	2,942	151,396
Punching and shearing machines:						
Valued under \$3,025 each	2,114	2,795	1,104	836	3,937	1,436
Valued at \$3,025 each or more	3,872	170,077	1,557	106,732	1,043	71,261
Bending and forming machines:						
Valued under \$3,025 each	4,891	5,346	5,646	4,439	4,036	2,716
Valued at \$3,025 each or more	5,143	238,925	1,708	102,293	1,776	104,227

See footnotes at end of table.

Table 20. **SHIPMENTS, EXPORTS, AND IMPORTS OF METALWORKING MACHINERY: 1992 AND 1991—Continued**

[Quantity in units; value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ^{1 2}		Imports for consumption ^{1 3}	
	Quantity	Value	Quantity	Value at port	Quantity	Value ⁴
1992—Cont.						
Presses, except forging presses:						
Valued under \$3,025 each	3,663	3,239	3,772	3,095	10,615	1,424
Machines valued at \$3,025 each or more:						
Open back inclinable and vertical	934	243,984	93	9,038	249	49,896
Hydraulic presses (metalworking only)	1,142	41,025	1,510	86,410	8,027	62,572
Forging machines, including presses	(D)	(D)	318	50,836	883	81,847
All other metal forming type machine tools:						
Valued under \$3,025 each	7,352	6,378	2,720	2,128	2,009	1,212
Machines valued at \$3,025 each or more:						
Die casting machines	72	26,222	344	13,534	325	21,196
Other metal forming machines	9,302	268,978	2,294	117,621	757	27,509
1991						
Boring and drilling machines, excluding multifunction NC machines, machining centers:						
Boring machines:						
Valued under \$3,025 each	(D)	(D)	2,044	1,805	3,555	1,600
Valued at \$3,025 each or more	551	92,939	178	14,918	638	58,598
Drilling machines:						
Valued under \$3,025 each	5,147	6,542	1,650	1,114	180,409	22,090
Valued at \$3,025 each or more	527	19,052	1,242	23,384	1,043	41,840
Gear cutting machines	244	115,226	1,110	65,743	256	26,249
Grinding, polishing, buffing, honing, and lapping machinery (except gear tooth grinding, lapping, polishing, and buffing machines):						
Valued under \$3,025 each	43,488	12,975	9,877	2,543	580,312	23,101
Valued at \$3,025 each or more	5,699	365,971	1,563	75,493	5,626	256,600
Lathes (turning machines):						
Valued under \$3,025 each	(D)	(D)	1,274	2,077	7,992	9,314
Machines valued at \$3,025 each or more:						
Horizontal NC turning machines:						
Multiple spindle NC turning machines...	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
Small single spindle NC turning machines	1,421	133,786	199	17,541	1,724	140,052
Medium spindle and large single spindle NC turning machines	282	72,492	67	12,539	737	132,195
Vertical NC turning machines	95	63,100	31	2,507	76	24,212
Nonnumerically controlled turning machines:						
Horizontal spindle lathes	268	12,788	38	593	3,362	34,121
Single spindle automatic lathes	(D)	(D)	-	-	323	8,261
Multiple spindle automatic lathes	146	26,317	70	3,690	50	6,103
All other horizontal turning machines ...	(⁵)	(⁵)	325	7,384	757	17,998
Vertical turret lathes and vertical boring machines	(⁵)	(⁵)	30	1,069	93	4,882
All other vertical turning machines	378	8,604	78	3,029	484	14,536
Milling machines:						
Valued under \$3,025 each	(D)	(D)	2,974	4,404	7,544	11,334
Valued at \$3,025 each or more	2,772	201,137	575	34,339	3,281	76,375

See footnotes at end of table.

Table 20. **SHIPMENTS, EXPORTS, AND IMPORTS OF METALWORKING MACHINERY: 1992 AND 1991—Continued**

[Quantity in units; value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ^{1 2}		Imports for consumption ^{1 3}	
	Quantity	Value	Quantity	Value at port	Quantity	Value ⁴
1991—Cont.						
Machining centers (multifunction NC machines):						
Drill, mill, and bore, vertical (automatic tool change):						
Y-axis travel less than 20 inches and 20 inches through 26 inches.....	1,269	112,401	72	12,189	1,780	159,005
Y-axis travel 26 inches and over	243	42,370	19	4,651	121	20,129
Drill, mill, and bore, horizontal (automatic tool change)	391	191,282	45	16,053	482	115,523
Other machining centers	413	15,746	160	18,002	305	144,425
Station type machines	336	450,366	101	48,336	169	132,330
Other metal cutting machine tools:						
Valued under \$3,025 each	6,881	6,472	21,195	10,935	133,947	25,164
Valued at \$3,025 each or more	5,228	189,182	3,999	109,782	3,223	159,193
Punching and shearing machines:						
Valued under \$3,025 each	2,583	3,269	1,351	827	3,973	1,987
Valued at \$3,025 each or more	4,007	177,487	1,338	52,587	985	62,163
Bending and forming machines:						
Valued under \$3,025 each	5,620	5,711	5,511	4,391	4,831	2,675
Valued at \$3,025 each or more	5,423	198,646	1,582	66,231	1,649	85,099
Presses, except forging presses:						
Valued under \$3,025 each	3,763	3,476	3,463	2,777	2,750	905
Machines valued at \$3,025 each or more:						
Open back inclinable and vertical	919	200,764	144	14,240	203	89,187
Hydraulic presses (metalworking only)	1,220	93,667	1,705	71,916	2,677	62,920
Forging machines, including presses	(D)	(D)	352	53,022	764	60,787
All other metal forming type machine tools:						
Valued under \$3,025 each	7,596	6,779	2,723	1,875	2,740	1,099
Machines valued at \$3,025 each or more:						
Die casting machines	56	28,055	424	8,825	242	28,765
Other metal forming machines	4,890	315,199	1,525	97,443	910	29,567

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

¹For comparison of SIC-based product codes, Schedule B export numbers, and HTSUSA import numbers, see appendix B.²Source: Bureau of the Census report EM 545, *U.S. Exports*.³Source: Bureau of the Census report IM 145, *U.S. General Imports for Consumption*.⁴This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus U.S. import duties.⁵Data for "Multiple-spindle NC turning machines and medium" are included with "Medium and large single spindle NC turning machines" to avoid disclosing individual figures.⁶Data for manufacturer's shipments of "All other horizontal turning machines" and "Vertical turret lathes and vertical boring machines" are combined with "All other vertical turning machines."

HISTORICAL NOTE

Data on metalworking machinery have been collected by the Bureau of the Census since 1942. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

FUNDING

The survey is funded, in part, by the Association for Manufacturing Technologies.

CONTACT FOR DATA USERS

For additional information about these data, contact Michael Yamaner, 301-763-7866.

10.6 TRUCK TRAILERS

INTRODUCTION

These data cover all companies engaged in the manufacture, in the United States, of truck trailers with a rating of 10,000 pounds or more per axle. Truck trailers with a rating of less than 10,000 pounds per axle are excluded.

The statistics were collected by mail on Bureau of the Census monthly Form M37L, Truck Trailers. The panel for this survey consists of all known manufacturers of truck trailers meeting the required specifications, approximately 168 companies.

Participation in the monthly survey is voluntary. However, annual reports are required from those companies that do not report monthly. The annual summary includes revisions of monthly data originally estimated for companies which only report annually.

SUMMARY OF FINDINGS

The value of factory shipments of complete truck trailers was \$2,756.0 million in 1992, an increase of 33 percent from shipments of \$2,065.9 million for 1991. Quantity of complete truck trailer shipments for 1992 was 165,268 units, an increase of 35 percent from shipments of 122,477 units in 1991.

Complete trailer vans shipped in 1992 increased 44 percent in quantity and 50 percent in value from the 1991 levels. The quantity of tank-type trailers shipped in 1992

decreased 9 percent from 1991. The 1992 value of tank-type trailers decreased 10 percent from the 1991 level. Shipments of platform trailers in 1992 increased 16 percent in units and 22 percent in value from the 1991 levels.

EXPLANATION OF TERMS

Truck Trailers. A property-carrying vehicle, or chassis thereof, drawn by a truck or truck-tractor and having one or more axles. Only trailers with a rating of 10,000 pounds or more per axle are included in this survey. Trailers that are produced on a purchased or leased chassis are included. The value of these trailers includes the value of the purchased or leased chassis.

Complete Trailers. A trailer in which the body is permanently attached on the chassis. New trailer chassis shipped with detachable trailers are not included.

Detachable Trailer Bodies. A detachable trailer generally is designed to be used with a trailer chassis, except when transported on ships or rail cars (minimum size 8'x 8'x 10'). This includes all trailer bodies that are manufactured separately as trailer bodies without chassis or running gear.

Detachable Trailer Chassis and Running Gear. Includes all trailer chassis and running gear manufactured for use with detachable trailer bodies, whether shipped with such trailer bodies or not.

Table 21. **QUANTITY OF SHIPMENTS OF TRUCK TRAILERS: 1983 TO 1992**

[Number of units]

Product description	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983
Complete trailers	165,268	122,361	149,117	181,478	186,483	180,142	167,312	179,808	213,911	117,742
Vans	127,205	84,626	103,894	130,163	131,991	135,380	120,647	126,668	159,931	83,375
Tank	3,750	4,113	4,444	4,789	5,075	4,636	4,370	5,307	6,504	3,851
Platform	13,432	11,585	13,479	18,411	17,648	14,975	13,064	16,842	21,460	14,041
All other complete trailers	20,881	22,037	27,300	28,115	31,769	25,151	29,231	30,991	26,016	16,475
Detachable trailer bodies	(¹)	(¹)	(¹)	(¹)	5,223	438	417	252	1,054	2,223
Detachable trailer chassis	¹ 23,408	¹ 24,491	¹ 17,214	¹ 24,779	37,729	23,014	15,360	28,876	24,205	14,647
Dollies and converter gear	3,899	3,097	2,272	2,668	2,917	4,614	4,567	4,123	7,347	3,240

¹Data for "Detachable trailer bodies" and "Detachable trailer chassis" were combined for 1989 through 1992.

Table 22. QUANTITY OF SHIPMENTS OF TRUCK TRAILERS, BY MONTH AND TYPE OF TRAILER: 1992

[Number of units]

Product code	Product description	Number of companies	Total	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Complete trailers and chassis (except detachables).....	162	165,268	11,281	12,128	13,175	13,703	14,362	15,042	12,913	15,077	14,828	15,810	13,124	13,825
	Vans.....	45	127,205	8,498	9,297	9,908	10,358	11,127	11,563	9,678	11,730	11,524	12,667	10,178	10,677
	Closed top:														
	Insulated (refrigerated) .	15	20,685	1,402	1,598	1,687	1,702	1,681	1,549	1,635	1,947	1,900	2,052	1,700	1,832
37151 02	Steel AND	2													
37151 14	Aluminum AND	12													
37151 60	FRP	3	20,685	1,402	1,598	1,687	1,702	1,681	1,549	1,635	1,947	1,900	2,052	1,700	1,832
	Semi-insulated (non-refrigerated) .	10	1,589	110	144	145	120	145	147	112	157	103	120	103	183
37151 04	Steel AND	2													
37151 16	Aluminum AND	8													
37151 62	FRP	2	1,589	110	144	145	120	145	147	112	157	103	120	103	183
	Drop frame type (12 inches or more drop) .	12	2,745	169	148	205	228	228	338	288	307	279	230	162	163
37151 05	Steel AND	2													
37151 15	Aluminum AND	11													
37151 64	FRP	4	2,745	169	148	205	228	228	338	288	307	279	230	162	163
	Livestock, including livestock drop frame...	7	2,111	188	166	162	161	152	136	190	192	187	193	208	176
37151 07	Steel AND	1													
37151 17	Aluminum.....	6	2,111	188	166	162	161	152	136	190	192	187	193	208	176
	All other closed-top dry freight vans, including curtain	24	96,043	6,335	6,973	7,428	7,837	8,654	9,126	7,063	8,743	8,597	9,674	7,695	7,918
	Steel.....	13	2,322	138	180	128	146	135	131	168	145	149	569	228	205
37151 10	Less than 30 feet AND	4													
37151 11	30 feet or greater .	12	2,322	138	180	128	146	135	131	168	145	149	569	228	205
	Aluminum.....	18	79,432	4,811	5,401	5,922	6,457	7,504	7,794	5,825	7,326	7,290	7,902	6,419	6,781
37151 23	Less than 30 feet .	12	10,101	781	1,243	1,227	1,061	1,446	733	515	808	394	405	615	873
37151 25	30 feet or greater .	17	69,331	4,030	4,158	4,695	5,396	6,058	7,061	5,310	6,518	6,896	7,497	5,804	5,908
	FRP	13	14,289	1,386	1,392	1,378	1,234	1,015	1,201	1,070	1,272	1,158	1,203	1,048	932
37151 67	Less than 30 feet AND	9													
37151 69	30 feet or greater .	13	14,289	1,386	1,392	1,378	1,234	1,015	1,201	1,070	1,272	1,158	1,203	1,048	932
	Open tops including low-side grain, and fruit	27	4,032	294	268	281	310	267	267	390	384	458	398	310	405
37151 12	Steel AND	4													
37151 26	Aluminum AND	23													
37151 70	FRP	2	4,032	294	268	281	310	267	267	390	384	458	398	310	405
	Tanks.....	22	3,750	344	365	398	343	318	344	334	259	253	236	266	290
37151 27	For flammable liquids (except casing head transport, including aircraft refuelers), all materials	12	1,272	141	166	174	197	77	112	91	85	83	73	86	87
37151 30	Coated for chemicals and acids, all materials.....	7	1,561	113	108	125	147	128	150	152	132	124	122	134	126

See footnotes at end of table.

Table 22. QUANTITY OF SHIPMENTS OF TRUCK TRAILERS, BY MONTH AND TYPE OF TRAILER: 1992—Continued
 [Number of units]

Product code	Product description	Number of companies	Total	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
37151 28 37151 32	Complete trailers and chassis (except detachables)—Cont. Tanks—Cont. For asphalt, all materials . All other, including non-coated for chemicals and acids, high pressure, food and milk, sanitary, and cryogenics, all materials	11	430	'15	'39	'65	'59	67	'47	'50	'14	'21	'11	'19	'23
37151 33	Bulk commodity and dry materials, including pneumatic and mechanical discharge, both tank and hopper types, (except van)	13	487	'75	'52	'34	'40	'46	'35	'41	'28	'25	'30	'27	'54
37151 35 37151 37	Pole, logging, and pipe Platform	16 12 31	1,175 422 13,432	'98 '36 937	'93 '34 977	'122 28 1,054	'98 37 1,139	'95 38 1,073	'111 '34 1,334	'104 35 1,167	'99 '34 1,204	'85 '30 1,170	'91 43 1,197	'85 41 1,069	'94 32 1,111
37151 38 37151 39	Low-bed heavy haulers, over 10-ton capacity, excluding tilt-bed trailers . . . Under 40-ton capacity . . . 40-ton capacity and over .	38 32 26	6,762 4,617 2,145	478 '336 '142	497 '321 176	589 '390 199	561 '382 179	604 390 '214	593 '388 205	518 368 '150	607 438 169	610 '441 '169	555 '402 '153	554 '358 '196	596 '403 '193
37151 40 37151 42	Dump trailers and dump chassis, highway type (rear, side, and bottom dump, including nonpneumatic hoppers) For materials For other, including demolition and excavation	45 36 19	5,203 3,607 1,596	365 '264 '101	381 '262 '119	455 '301 '154	497 '351 '146	463 '313 '150	469 '318 '151	465 '293 '172	437 '307 '130	444 '311 '133	437 '322 '115	367 '268 '99	423 '297 '126
37151 44 37151 49	Automobile transport trailers All other trailers and chassis (except detachable trailers and detachable trailer chassis)	7 42	1,313 6,006	'103 '422	'89 '395	'115 '506	'98 '572	'90 '554	'96 '498	'93 '519	'120 '587	'125 '587	'131 '453	'108 '456	'145 '457
37151 53 37151 54	Detachable trailer bodies (containers), sold separately AND Detachable trailer chassis and running gear, sold separately	16 17	23,407	2,669	2,291	2,425	'2,191	1,837	1,731	1,225	1,433	1,647	1,510	'1,902	'2,546
37151 45	Dollies and converter gear . .	25	3,899	'419	358	599	696	296	224	458	'206	'208	'171	'164	'100

(FRP) Fiberglass reinforced plastic/plywood.

'Revised by 5 percent or more from previously published figures.

Table 23. VALUE OF SHIPMENTS OF TRUCK TRAILERS, BY MONTH AND TYPE OF TRAILER: 1992

[Thousands of dollars]

Product code	Product description	Number of companies	Total	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Complete trailers and chassis (except detachables)	162	2,756,018	191,596	200,217	220,568	221,806	230,181	247,701	217,240	246,196	249,171	264,610	225,613	241,119
	Vans	45	1,963,957	130,403	138,820	150,780	154,069	165,881	178,959	150,582	179,835	181,905	199,381	161,555	171,787
	Closed top:														
	Insulated (refrigerated).	15	460,478	32,682	36,075	36,572	34,735	36,162	34,890	35,764	43,272	43,428	47,532	37,821	41,545
37151 02	Steel AND	2													
37151 14	Aluminum AND	12													
37151 60	FRP	3	460,478	32,683	36,075	36,572	34,735	36,162	34,890	35,764	43,272	43,428	47,532	37,821	41,545
	Semi-insulated (nonrefrigerated)	10	47,439	3,335	4,082	5,042	3,551	4,049	4,073	3,633	4,435	3,672	3,438	3,351	4,778
37151 04	Steel AND	2													
37151 16	Aluminum AND	8													
37151 62	FRP	2	47,439	'3,335	'4,082	'5,042	'3,551	'4,049	'4,073	'3,633	'4,435	'3,672	'3,438	'3,351	'4,778
	Drop frame type (12 inches or more drop) ..	12	54,902	3,587	3,287	4,385	4,812	4,668	6,796	5,493	5,750	4,986	3,841	3,556	3,741
37151 05	Steel AND	2													
37151 15	Aluminum AND	11													
37151 64	FRP	4	54,902	'3,587	'3,287	'4,385	'4,812	'4,668	'6,796	'5,493	'5,750	'4,986	'3,841	'3,556	'3,741
	Livestock, including livestock drop frame ..	7	39,737	3,772	3,033	2,903	2,878	2,599	2,103	3,917	3,921	3,777	3,951	3,490	3,393
37151 07	Steel AND	1													
37151 17	Aluminum AND	6	39,737	'3,772	'3,033	'2,903	'2,878	'2,599	'2,103	'3,917	'3,921	'3,777	'3,951	'3,490	'3,393
	All other closed-top dry freight vans, including curtain	24	1,284,795	81,661	87,013	96,538	102,046	113,054	125,967	94,397	115,306	117,612	133,099	107,387	110,715
	Steel	13	33,618	1,956	2,638	2,001	2,077	2,079	2,045	2,368	2,422	2,366	7,220	3,229	3,217
37151 10	Less than 30 feet long AND	4													
37151 11	30 feet or greater ..	12	33,618	1,956	2,638	'2,001	2,077	2,079	'2,045	2,368	2,422	'2,366	7,220	3,229	'3,217
	Aluminum	18	1,093,735	66,389	71,022	79,541	86,777	99,541	109,950	79,920	99,212	102,765	112,055	90,982	95,581
37151 23	Less than 30 feet long	12	94,352	'7,534	'11,410	'11,381	'9,689	'13,095	'7,016	'4,961	'7,158	'3,967	'3,936	'5,900	'8,305
37151 25	30 feet or greater ..	17	99,383	'58,855	'59,612	'68,160	'77,088	'86,446	'102,934	'74,959	'92,054	'98,798	108,119	'85,082	87,276
	FRP	13	157,442	13,316	13,353	14,996	13,192	11,434	13,972	12,109	13,672	12,481	13,824	13,176	11,917
37151 67	Less than 30 feet long AND	9													
37151 69	30 feet or greater ..	13	157,442	'13,316	'13,353	'14,996	'13,192	'11,434	'13,972	'12,109	'13,672	'12,481	'13,824	'13,176	'11,917
	Open tops, including low-side grain, and fruit	27	76,606	5,366	5,330	5,340	6,047	5,349	5,130	7,378	7,151	8,430	7,520	5,950	7,615
37151 12	Steel AND	4													
37151 26	Aluminum AND	23													
37151 70	FRP	2	76,606	5,366	'5,330	'5,340	'6,047	'5,349	'5,130	7,378	7,151	8,430	'7,520	5,950	7,615
	Tanks	22	146,273	14,421	14,133	15,017	12,875	12,237	13,231	12,952	10,112	9,904	9,271	10,453	11,667
37151 27	For flammable liquids (except casing head transport, including aircraft refuelers), all materials	12	49,716	5,987	6,642	6,732	'3,764	2,970	'4,483	'3,456	'3,159	'3,061	'2,729	'3,319	'3,414

See footnotes at end of table

Table 23. VALUE OF SHIPMENTS OF TRUCK TRAILERS, BY MONTH AND TYPE OF TRAILER: 1992—Continued

[Thousands of dollars]

Product code	Product description	Number of companies	Total	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
37151 30	Complete trailers and chassis (except detachables)—Cont. Tanks—Cont.	7	64,015	5,033	4,617	4,906	5,862	5,172	5,879	6,298	5,438	5,074	5,032	5,464	'5,240
37151 28	Coated for chemicals and acids, all materials	11	13,919	'723	'1,116	2,070	1,781	2,138	1,518	'1,570	'478	'774	'405	'642	'704
37151 32	For asphalt, all materials. All other, including non-coated for chemicals and acids, high pressure, food and milk, sanitary, and cryogenics, all materials.	13	18,623	'2,678	'1,758	'1,309	'1,468	'1,957	'1,351	'1,628	'1,037	'995	'1,105	'1,028	'2,309
37151 33	Bulk commodity and dry materials, including pneumatic and mechanical discharge, both tank and hopper types (except van)	16	39,273	'3,316	'3,067	'4,024	'3,133	'3,168	'3,844	'3,540	'3,376	'2,751	'3,161	'2,770	'3,123
37151 35	Pole, logging, and pipe.	12	4,252	'385	'359	'268	'336	'376	'318	'334	'322	'294	'454	'464	'342
37151 37	Platform.	31	193,742	13,428	'14,535	'15,163	'16,308	'15,706	16,697	'16,678	17,822	'17,575	17,400	'15,715	'16,715
37151 38	Low-bed heavy haulers, over 10-ton capacity, excluding tilt-bed trailers	38	176,893	13,245	13,705	15,104	14,251	12,703	14,951	13,766	15,239	15,736	14,659	16,907	16,627
37151 39	Under 40-ton capacity ... 40-ton capacity and over.	32 26	68,470 108,423	5,093 '8,152	5,131 '8,574	5,433 '9,671	5,343 '8,908	'5,494 '7,209	5,768 '9,183	'5,982 '7,784	'6,257 '8,982	'6,430 '9,306	6,115 '8,544	5,685 '11,222	5,739 '10,888
37151 40	Dump trailers and dump chassis, highway type (rear, side, and bottom dump, including non-pneumatic hoppers)	45	131,604	8,951	8,888	11,459	12,235	11,994	11,733	11,605	10,603	11,807	11,491	9,272	11,566
37151 42	For materials	36	87,442	'6,308	'6,164	7,101	8,473	'7,754	7,493	6,851	'7,314	7,893	8,124	6,397	'7,570
	For other, including demolition and excavation.	19	44,162	'2,643	'2,724	4,358	'3,762	'4,240	'4,240	4,754	'3,289	3,914	'3,367	'2,875	'3,996
37151 44	Automobile transport trailers	7	51,997	'4,247	'3,716	'4,665	'4,051	'3,715	'3,965	'3,658	'4,468	'4,531	'4,864	'4,506	'5,611
37151 49	All other trailers and chassis (except detachable trailers and detachable trailer chassis).	42	48,027	'3,200	'2,994	'4,088	'4,548	'4,401	'4,003	'4,125	'4,419	'4,668	'3,929	'3,971	'3,681
37151 53	Detachable trailer bodies (containers), sold separately AND	16													
37151 54	Detachable trailer chassis and running gear, sold separately	17	161,659	19,357	'16,933	'16,726	'15,458	'13,188	'10,923	'8,396	'9,535	'11,247	'8,628	'13,477	'17,791
37151 45	Dollies and converter gear .	25	18,223	'1,629	1,357	2,467	3,325	1,349	1,085	2,349	'1,170	'1,054	'942	'827	'669

(FRP) Fiberglass reinforced plastic/plywood.

'Revised by 5 percent or more from previously published figures.

Table 24. QUANTITY OF SHIPMENTS OF TRUCK TRAILERS, BY MONTH AND TYPE OF TRAILER: 1991

[Number of units]

Product code	Product description	Number of companies	Total	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Complete trailers and chassis (except detachables).....	167	122,361	8,410	8,191	10,837	10,618	10,722	9,918	10,044	11,583	10,685	11,332	10,047	9,963
	Vans.....	51	84,626	5,438	5,411	7,279	6,816	7,017	6,733	6,824	8,509	7,926	8,006	7,456	7,211
	Closed top:														
	Insulated (refrigerated) .	17	15,989	1,203	1,078	1,163	1,343	1,387	1,277	1,237	1,633	1,373	1,446	1,392	1,457
37151 02	Steel AND	2													
37151 14	Aluminum AND	15													
37151 60	FRP	2	15,989	1,203	1,078	1,163	1,343	1,387	1,277	1,237	1,633	1,373	1,446	1,392	1,457
	Semi-insulated (non-refrigerated)	13	1,295	109	55	63	247	91	113	80	125	137	124	73	78
37151 04	Steel AND	5													
37151 16	Aluminum AND	9													
37151 62	FRP	2	1,295	109	55	63	247	91	113	80	125	137	124	73	78
	Drop frame type (12 inches or more drop) .	16	2,245	184	109	179	202	198	207	272	351	252	145	86	60
37151 05	Steel AND	4													
37151 15	Aluminum AND	16													
37151 64	FRP	5	2,245	184	109	179	202	198	207	272	351	252	145	86	60
	Livestock, including livestock drop frame...	8	1,146	63	61	125	105	140	64	91	110	102	107	93	85
37151 07	Steel AND	2													
37151 17	Aluminum.....	8	1,146	63	61	125	105	140	64	91	110	102	107	93	85
	All other closed-top dry freight vans, including curtain	25	60,611	3,640	3,878	5,518	4,674	5,008	4,851	4,844	5,924	5,667	5,840	5,539	5,228
	Steel.....	10	1,438	162	261	70	78	63	199	153	146	80	87	70	69
37151 10	Less than 30 feet long AND	6													
37151 11	30 feet or greater .	10	1,438	162	261	70	78	63	199	153	146	80	87	70	69
	Aluminum.....	20	50,496	3,101	3,217	4,018	3,856	4,335	3,670	3,973	5,190	4,697	5,100	4,734	4,605
37151 23	Less than 30 feet long.	14	7,726	228	621	889	944	695	483	812	839	643	495	555	522
37151 25	30 feet or greater .	20	42,770	2,873	2,596	3,129	2,912	3,640	3,187	3,161	4,351	4,054	4,605	4,179	4,083
	FRP	15	8,677	377	400	1,430	740	610	982	718	588	890	653	735	554
37151 67	Less than 30 feet long AND	9													
37151 69	30 feet or greater .	15	8,677	377	400	1,430	740	610	982	718	588	890	653	735	554
	Open tops, including low-side grain, and fruit	31	3,340	239	230	231	245	193	221	300	366	395	344	273	303
37151 12	Steel AND	6													
37151 26	Aluminum AND	30													
37151 70	FRP	3	3,340	239	230	231	245	193	221	300	366	395	344	273	303
37151 27	Tanks.....	26	4,113	344	376	326	321	395	330	289	296	295	384	393	353
	For flammable liquids (except casing head transport, including aircraft refuelers), all materials	14	1,704	128	120	128	115	167	126	115	131	130	183	197	164
37151 30	Coated for chemicals and acids, all materials	11	1,408	143	174	111	126	117	111	107	95	88	125	119	92
37151 28	For asphalt, all materials .	8	240	15	31	24	34	28	28	24	17	(D)	(D)	12	16

See footnotes at end of table.

Table 24. QUANTITY OF SHIPMENTS OF TRUCK TRAILERS, BY MONTH AND TYPE OF TRAILER: 1991—Continued

[Number of units]

Product code	Product description	Number of companies	Total	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
37151 32	Complete trailers and chassis (except detachables)—Cont. Tanks—Cont. All other, including non-coated for chemicals and acids, high pressure, food and milk, sanitary, and cryogenics, all materials.....	18	761	58	51	63	46	83	65	43	53	77	76	65	81
37151 33	Bulk commodity and dry materials, including pneumatic and mechanical discharge, both tank and hopper types (except van)	16	1,009	57	71	125	114	106	92	77	91	69	84	68	55
37151 35	Pole, logging, and pipe.....	12	276	33	34	23	13	5	17	36	35	14	17	17	32
37151 37	Platform..... Low-bed heavy haulers, over 10-ton capacity (excluding tilt-bed trailers) .	39	11,585	1,131	991	972	1,100	1,035	949	951	1,070	911	977	773	725
37151 38	Under 40-ton capacity ...	37	6,163	517	519	585	583	650	542	450	488	529	554	401	345
37151 39	40-ton capacity and over.	33	4,346	349	316	369	391	436	418	348	374	422	420	284	219
	Dump trailers and dump chassis, highway type (rear, side, and bottom dump, including nonpneumatic hoppers).....	46	4,579	322	365	467	602	497	463	346	273	288	351	257	348
37151 40	For materials.....	41	3,148	230	222	333	442	337	373	232	195	201	223	183	177
37151 42	For other (including demolition and excavation) ..	21	1,431	92	143	134	160	160	90	114	78	87	128	74	171
37151 44	Automobile transport trailers	7	470	43	35	33	37	38	36	32	37	37	44	57	41
37151 49	All other trailers and chassis (except detachable trailers and detachable trailer chassis)	47	9,540	525	389	1,027	1,032	979	756	1,039	784	616	915	625	853
37151 53	Detachable trailer bodies (containers), sold separately AND	16													
37151 54	Detachable trailer chassis and running gear, sold separately	21	24,491	1,543	1,040	1,559	1,986	2,171	1,677	1,273	1,474	2,246	3,179	2,816	3,527
37151 45	Dollies and converter gear..	27	3,000	44	157	386	334	169	152	220	262	203	391	377	402

(D) Data withheld to avoid disclosing figures for individual companies.

(FRP) Fiberglass reinforced plastic/plywood.

*Revised by 5 percent or more from previously published figures.

Table 25. VALUE OF SHIPMENTS OF TRUCK TRAILERS, BY MONTH AND TYPE OF TRAILER: 1991
[Thousands of dollars]

Product code	Product description	Number of companies	Total	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Complete trailers and chassis (except detachables)	167	2,065,871	153,055	146,605	178,525	179,471	178,845	169,327	161,098	190,519	177,302	190,877	171,519	168,051
	Vans	51	1,359,767	92,357	88,959	112,895	109,946	110,766	110,590	107,147	136,053	125,995	128,251	120,040	116,768
	Closed top:														
	Insulated (refrigerated):														
37151 02	Steel AND	17	373,256	26,455	25,305	29,122	33,008	30,814	31,690	28,454	38,526	32,525	33,196	31,614	32,547
37151 14	Aluminum AND	2													
37151 60	FRP	15	373,256	26,455	25,305	29,122	33,008	30,814	31,690	28,454	38,526	32,525	33,196	31,614	32,547
	Semi-insulated (nonrefrigerated):														
37151 04	Steel AND	13	27,896	3,069	1,216	1,430	4,514	2,058	2,524	1,881	2,604	2,717	2,395	1,640	1,848
37151 16	Aluminum AND	5													
37151 62	FRP	2	27,896	3,069	1,216	1,430	4,514	2,058	2,524	1,881	2,604	2,717	2,395	1,640	1,848
	Drop frame type (12 inches or more drop):														
37151 05	Steel AND	16	40,480	3,860	2,246	3,417	4,056	4,252	3,738	4,437	5,263	4,030	2,433	1,689	1,059
37151 15	Aluminum AND	4													
37151 64	FRP	5	40,480	3,860	2,246	3,417	4,056	4,252	3,738	4,437	5,263	4,030	2,433	1,689	1,059
	Livestock, including livestock drop frame:														
37151 07	Steel AND	8	33,478	2,088	2,001	3,423	2,818	3,821	1,826	2,686	3,284	3,056	3,315	2,731	2,429
37151 17	Aluminum	2	33,478	2,088	2,001	3,423	2,818	3,821	1,826	2,686	3,284	3,056	3,315	2,731	2,429
	All other closed-top dry freight vans, including curtain:														
	Steel	25	817,883	51,237	52,414	71,047	60,808	65,793	66,506	64,050	79,296	76,206	80,391	77,102	73,033
	Less than 30 feet long AND	10	13,793	1,531	2,748	547	669	471	2,247	1,483	1,394	749	899	551	504
37151 10	30 feet or greater	6	13,793	1,531	2,748	547	669	471	2,247	1,483	1,394	749	899	551	504
37151 11	Aluminum	10	694,079	44,173	44,043	52,393	51,334	57,940	51,173	53,626	70,544	64,627	71,588	67,304	65,354
37151 23	Less than 30 feet long	20	73,382	2,138	5,873	8,382	8,521	6,554	4,770	7,762	7,853	5,989	4,964	5,364	5,212
37151 25	30 feet or greater	14	620,697	42,035	38,170	44,011	42,813	51,386	46,403	45,864	62,691	58,638	66,604	61,940	60,142
	FRP	20	110,011	5,533	5,623	18,107	8,805	7,382	13,086	8,941	7,358	10,830	7,924	9,247	7,175
37151 67	Less than 30 feet long AND	15	110,011	5,533	5,623	18,107	8,805	7,382	13,086	8,941	7,358	10,830	7,924	9,247	7,175
37151 69	30 feet or greater	9	110,011	5,533	5,623	18,107	8,805	7,382	13,086	8,941	7,358	10,830	7,924	9,247	7,175
	Open tops including low-side grain, and fruit:														
37151 12	Steel AND	31	66,774	5,648	5,777	4,456	4,742	4,028	4,306	5,639	7,080	7,461	6,521	5,264	5,852
37151 26	Aluminum AND	6													
37151 70	FRP	30	66,774	5,648	5,777	4,456	4,742	4,028	4,306	5,639	7,080	7,461	6,521	5,264	5,852
	Tanks:														
37151 27	For flammable liquids (except casing head transport, including aircraft refuelers), all materials	26	162,454	14,629	13,660	12,301	12,993	15,331	13,198	11,009	11,510	11,710	15,642	16,294	13,500
	Coated for chemicals and acids, all materials														
37151 30	For asphalt, all materials	14	70,413	5,720	3,981	4,970	4,947	7,146	5,212	4,503	5,242	5,172	8,112	8,658	6,750
37151 28		11	56,497	5,902	6,983	4,365	5,176	4,626	4,331	4,103	3,845	3,612	5,015	4,842	3,697
		8	8,778	545	860	741	1,106	1,030	988	891	643	(D)	(D)	595	702

Base footnotes at end of table.

Table 25. VALUE OF SHIPMENTS OF TRUCK TRAILERS, BY MONTH AND TYPE OF TRAILER: 1991—Continued

[Thousands of dollars]

Product code	Product description	Number of companies	Total	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
37151 32	Complete trailer and chassis (except detachables)—Cont. Tanks—Cont. All other, including non-coated for chemicals and acids, high pressure, food and milk, sanitary, and cryogenics, all materials.....	18	28,766	2,462	1,836	2,225	1,764	2,529	2,667	1,512	1,780	2,926	2,515	2,199	2,351
37151 33	Bulk commodity and dry materials, including pneumatic and mechanical discharge, both tank and hopper types (except van)	16	35,574	1,963	2,477	3,995	4,194	4,007	3,396	2,734	3,303	2,432	2,857	2,272	1,944
37151 35	Pole, logging, and pipe.....	12	2,697	300	252	125	86	30	121	309	259	47	62	61	1,045
37151 37	Platform.....	39	158,467	15,062	13,491	12,814	14,533	13,255	12,871	13,497	15,201	12,744	13,633	10,673	10,693
37151 38	Low-bed heavy haulers, over 10-ton capacity, excluding tilt-bed trailers	37	142,375	13,296	13,693	16,847	13,980	14,595	11,075	9,425	10,231	10,506	12,456	9,158	7,113
37151 39	Under 40-ton capacity... 40-ton capacity and over. Dump trailers and dump chassis, highway type (rear, side, and bottom dump, including nonpneumatic hoppers)	33 30	58,912 83,463	4,934 8,362	4,635 9,058	5,522 11,325	5,283 8,697	6,041 8,554	5,464 5,611	4,709 4,716	4,733 5,498	5,590 4,916	5,716 6,740	3,794 5,364	2,491 4,622
37151 40	For materials	46	119,341	7,888	9,138	11,387	15,127	12,591	11,514	8,756	7,219	8,109	10,539	6,709	10,364
37151 42	For other, including demolition and excavation... Automobile transport trailers	41 21	77,929 41,412	5,403 2,485	5,160 3,978	7,972 3,415	10,457 4,670	8,468 4,123	9,159 2,355	5,987 2,769	4,868 2,351	5,202 2,907	5,840 4,699	4,636 2,073	4,777 5,587
37151 44	All other trailers and chassis (except detachable trailers and detachable trailer chassis)	7	19,225	1,630	1,622	1,283	1,458	1,465	1,491	1,358	1,451	1,541	1,873	2,407	1,646
37151 49	Detachable trailer bodies (containers), sold separately AND Detachable trailer chassis and running gear, sold separately	47	65,971	5,930	3,313	6,878	7,154	6,805	5,071	6,863	5,292	4,218	5,564	3,905	4,978
37151 53	Dollies and converter gear	16													
37151 54		21	138,553	11,539	6,972	7,601	9,999	12,251	8,839	5,182	6,878	13,526	18,921	15,681	21,164
37151 45		27	13,412	459	930	1,768	1,636	2,878	2,991	2,972	3,119	2,813	2,933	3,083	3,053

(D) Data withheld to avoid disclosing figures for individual companies.

(FRP) Fiberglass reinforced plastic/plywood.

*Revised by 5 percent or more from previously published figures.

Table 26. **QUANTITY AND VALUE OF SHIPMENTS OF TRUCK TRAILER, VANS, BY TYPE OF MATERIAL:
1992 AND 1991**

[Quantity in units; value in thousands of dollars]

Month	Total		FRP		Steel		Aluminum	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992								
Total.....	127,205	1,963,957	14,530	163,293	4,342	83,229	108,333	1,717,435
January.....	8,498	130,403	1,391	13,486	299	6,353	6,808	110,564
February.....	9,297	138,820	1,428	13,980	358	7,246	7,511	117,594
March.....	9,908	150,780	1,400	15,506	294	7,029	8,214	128,245
April.....	10,358	154,069	1,256	13,700	302	5,657	8,800	134,712
May.....	11,127	165,881	1,034	11,951	288	5,683	9,805	148,247
June.....	11,563	178,959	1,210	14,259	280	5,536	10,073	159,164
July.....	9,678	150,582	1,095	12,711	357	6,918	8,226	130,953
August.....	11,730	179,835	1,324	14,739	314	6,583	10,092	158,513
September.....	11,524	181,905	1,179	13,089	327	6,803	10,018	162,013
October.....	12,667	199,381	1,218	14,253	738	11,201	10,711	173,927
November.....	10,178	161,555	1,057	13,477	371	6,608	8,750	141,470
December.....	10,677	171,787	938	12,142	414	7,612	9,325	152,033
1991								
Total.....	84,626	1,359,767	9,265	119,376	2,067	32,628	73,294	1,207,763
January.....	5,438	92,357	588	8,674	231	4,102	4,619	79,581
February.....	5,411	88,959	540	8,096	307	4,021	4,564	76,842
March.....	7,279	112,895	1,433	18,204	129	2,016	5,717	92,675
April.....	6,816	109,946	743	8,934	134	2,317	5,939	98,695
May.....	7,017	110,766	651	8,027	101	1,770	6,265	100,969
June.....	6,733	110,590	1,023	13,764	236	3,420	5,474	93,406
July.....	6,824	107,147	730	9,150	198	2,836	5,896	95,161
August.....	8,509	136,053	601	7,597	225	3,556	7,683	124,900
September.....	7,926	125,995	940	11,633	129	2,225	6,857	112,137
October.....	8,006	128,251	703	8,561	135	2,393	7,168	117,297
November.....	7,456	120,040	750	9,484	115	1,907	6,591	108,649
December.....	7,211	116,768	563	7,252	127	2,065	6,521	107,451

(FRP) Fiberglass reinforced plastic/plywood.

Table 27. **SHIPMENTS AND EXPORTS OF TRUCK TRAILERS: 1992 AND 1991**

[Quantity in units; value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise ¹		Imports for consumption ¹	
	Quantity	Value, f.o.b. plant	Quantity ²	Value at port ²	Quantity ³	Value ³
1992						
Complete trailers and chassis (except detachables):						
Van type	127,205	1,963,957	4,470	81,986	57	715
Tank type	3,750	146,273	1,245	37,509	102	4,320
Platform type	13,432	193,742	1,156	11,058	6,578	1,395
Other	21,120	452,046	8,363	181,487	21,166	50,594
Detachable trailer bodies (containers)	(D)	(D)	(D)	31,009	(X)	118,916
1991						
Complete trailers and chassis (except detachables):						
Van type	84,626	1,359,767	2,965	47,922	82	497
Tank type	4,113	167,474	978	19,493	199	6,333
Platform type	11,585	158,467	939	8,240	6,643	1,649
Other	22,037	385,183	5,210	88,340	18,128	23,456
Detachable trailer bodies (containers)	(D)	(D)	(D)	24,512	(X)	105,383

(D) Data withheld to avoid disclosing figures for individual companies. (X) Not applicable.

¹The 1992 Schedule B export and import numbers are: Vans, 8716.39.0040; tank, 8716.31.0000; platform, 8716.39.0050; detachable trailer bodies, 8609.00.0000; all other trailers and chassis (except detachable trailers and detachable trailer chassis), 8716.39.0010, 8716.39.0090 and 8716.40.0000.²Source: Bureau of the Census report, FT 446, *U.S. Exports*.³These data should be used with caution. The M37L survey provides shipment data for trailers rated in 10,000 pounds per axle or more. This distinction does not apply for the comparable import figures.**HISTORICAL NOTES**

Data on truck trailers have been collected by the Bureau of the Census since 1942. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Lynn Sizemore, 301-763-5547.

Chapter 11. Aerospace

11.1 AEROSPACE ORDERS

INTRODUCTION

These data cover establishments primarily engaged in the development and/or manufacture of aerospace products, including aircraft, aircraft engines, aircraft parts and accessories, missiles and space vehicle systems, missile and space vehicle engines or propulsion units, and parts and subassemblies for missiles and space vehicles. An establishment is "primarily engaged" in aerospace if the value of aerospace products and services produced by that establishment exceeds the value of the establishment's production of other goods and services. Company plants or divisions in which the primary activity is other than the development and/or manufacture of aerospace products and services are not included in this survey.

SUMMARY OF FINDINGS

The backlog of orders for aircraft, missiles, space vehicles, and engines as of December 31, 1992, was \$225,719 million. This was an 8-percent decrease from the 1991 backlog of \$245,241 million.

Net new orders received during 1992 were \$103,547 million, or about a 15-percent decrease from the \$122,485 million received in 1991. Net sales, receipts, and/or billings in 1992 totaled \$121,852 million, a 2-percent decrease from the \$123,862 million reported in 1991.

EXPLANATION OF TERMS

Shipments (or Net Sales). Represents consolidated company sales, receipts, or billings, net after discounts and allowances. For firms reporting only for specific aerospace divisions or plants, it includes the value of the division or plant sales only. It includes all sales from aerospace production and receipts for research and development performed for others. Transfers to other reporting units (for example, separate aerospace divisions of the same company) are included.

Work performed under a fixed price contract is reported as a shipment if the product is delivered during the year. Work done on a cost-plus contract reflects cost incurred plus a portion of the profits for the contract (value of work done) during the year. Value of work done may be based

on (a) multiplying the estimated percentage of work completed during the year by the contract price, or (b) net billings for work done during the year.

Net New Orders. Includes (a) the sales value of orders received during the current reporting period for products and services to be delivered at some future date; (b) the sales value of orders for immediate delivery that have resulted in sales or shipments during the current reporting period; and (c) the net sales value of contract change documents that increase or decrease the sales value of the orders to which they are related, when the parties concerned are in substantial agreement as to the amount involved. The sales value of cancellations of existing orders is deducted. Only those orders that are supported by binding legal documents, such as signed contracts or letter contracts, are included as orders. In the case of letter contracts, the full amount of sales value is included if the parties concerned are in substantial agreement on this amount; otherwise, only the funds specifically authorized to be expended are included.

Backlog, End of Year (Unfilled Orders). Includes all orders as defined above that have not yet been reflected as shipments. Generally, unfilled orders at the end of the reporting period are equal to unfilled orders at the end of the prior period, plus net new orders received, less net shipments.

Prime Contracts and Subcontracts. Separate dollar values are reported for prime contracts and those received under subcontracts. All subcontracts, including those where it is known that the prime contract was let by a government, are reported as subcontracts received from "other customers."

Military and Nonmilitary. The term "military" refers to complete aircraft, aircraft engines, missile systems, space vehicle systems, engines and/or propulsion units for missile systems or space vehicles, and other aerospace-related activities for military applications, whether for tactical, strategic, or support functions. The term "nonmilitary" refers to the same products not built to military specifications.

TYPE OF CUSTOMER

U.S. Government (Military). Includes contracts with the Department of Defense (DOD) and other U.S. Government

agencies for products built to military specifications. Contracts for which the ultimate customer is a foreign customer, such as contracts made under the Foreign Military Assistance Program, are excluded.

Other Governments (Military). Includes contracts for products built to military specifications for governments other than the United States. It includes contracts through DOD or other U.S. Government agencies for which the ultimate customer is a foreign government. Contracts for foreign governments not to military specifications are classified as "nonmilitary" to other customers.

U.S. Government (Nonmilitary). Includes contracts with any U.S. Government agency for products not built to military specifications.

Other Customers (Nonmilitary). Includes contracts for products not built to military specifications for all customers other than U.S. Government agencies. It includes both domestic and foreign commercial customers, as well as foreign governments.

Table 1. **VALUE OF BACKLOG OF ORDERS, NET NEW ORDERS, AND NET SALES REPORTED BY MANUFACTURERS OF COMPLETE AIRCRAFT, SPACE VEHICLES, MISSILES, AND SELECTED PARTS: 1982 TO 1992**

[Millions of dollars]

Year ¹	Net new orders during year ²	Net sales during year	Backlog, end of year
1992	103,547	121,852	225,719
1991	122,485	123,862	245,241
1990	145,965	136,646	250,079
1989	173,635	122,148	252,401
1988	147,128	113,548	191,518
1987	121,224	110,301	158,650
1986	110,836	105,577	148,212
1985	110,968	100,522	142,953
1984	104,863	88,941	132,507
1983	91,647	83,453	116,585
1982	89,168	75,487	108,391

¹Data for 1989 are not comparable with earlier years and were previously unavailable. The extent of this noncomparability is unknown.

²These totals represent new orders received during the year, less terminations during the year.

Table 2. VALUE OF NET NEW ORDERS, NET SALES, AND BACKLOG OF ORDERS OF COMPLETE AIRCRAFT, SPACE VEHICLES, MISSILES, AND SELECTED PARTS, BY UNITED STATES GOVERNMENT AND OTHER CUSTOMERS: 1988 TO 1992

[Millions of dollars]

Year ¹	Net new orders ² (prime contracts and subcontracts)			Net sales, receipts, or billings			Backlog, end of year		
	Total	United States Government ³	Other customers	Total	United States Government ³	Other customers	Total	United States Government ³	Other customers
1992.....	103,547	56,764	46,783	121,852	62,888	58,964	225,719	81,241	144,478
1991.....	122,485	66,410	56,075	123,862	67,180	56,682	245,241	86,566	158,675
1990.....	145,965	56,264	89,701	136,646	73,552	63,094	250,079	82,017	168,062
1989.....	173,635	80,633	93,002	122,148	72,184	49,964	252,401	107,797	144,604
1988.....	147,128	67,850	79,278	113,548	68,104	45,444	191,518	92,394	99,124

¹Data for 1989 are not comparable with earlier years and were previously unavailable. The extent of this noncomparability is unknown.

²These data represent new orders received during the year less terminations during the year.

³These data represent prime contracts only. All subcontracts, including those where it is known that the prime contract was let by the U.S. Government, are reported as subcontracts from "Other customers."

Table 3. VALUE OF NET NEW ORDERS, NET SALES, AND BACKLOG OF ORDERS OF COMPLETE AIRCRAFT, SPACE VEHICLES, MISSILES, AND SELECTED PARTS, BY MILITARY AND NONMILITARY: 1988 TO 1992

[Millions of dollars]

Year ¹	Net new orders ² (prime contracts and subcontracts)			Net sales, receipts, or billings			Backlog, end of year		
	Total	Military	Nonmilitary	Total	Military	Nonmilitary	Total	Military	Nonmilitary
1992.....	103,547	58,799	44,748	121,852	62,893	58,959	225,719	85,096	140,623
1991.....	122,485	63,017	59,468	123,862	67,089	56,773	245,241	89,517	155,724
1990.....	145,965	56,405	89,560	136,646	73,616	63,030	250,079	88,471	161,608
1989.....	173,635	79,992	93,643	122,148	71,647	50,501	252,401	114,070	138,331
1988.....	147,128	69,209	77,919	113,548	69,448	44,100	191,518	99,117	92,401

¹Data for 1989 are not comparable with earlier years and were previously unavailable. The extent of this noncomparability is unknown.

²These data represent new orders received during the year, less terminations during the year.

Table 4. VALUE OF NET NEW ORDERS, NET SALES, AND BACKLOG OF ORDERS OF COMPLETE AIRCRAFT, SPACE VEHICLES, MISSILES, AND SELECTED PARTS: 1992 AND 1991

[Millions of dollars]

Product description	Number of companies	Net new orders			Shipments (or net sales)	Backlog, end of year
		Total	Prime contract	Subcontract		
1992						
Total	50	103,547	101,704	1,843	121,852	225,719
Military	(NA)	58,799	58,799	(NA)	62,893	85,096
U.S. Government	39	51,075	51,075	(NA)	56,111	72,344
Other governments	28	7,724	7,724	(NA)	6,782	12,752
Nonmilitary	(NA)	44,748	42,905	1,843	58,959	140,623
U.S. Government	31	5,689	5,689	(NA)	6,777	8,897
Other customers	44	39,059	37,216	1,843	52,182	131,726
Complete aircraft and parts	(NA)	36,963	36,963	(1)	54,019	130,868
Military	(NA)	16,418	16,418	(NA)	18,411	29,743
U.S. Government	18	12,799	12,799	(NA)	15,009	22,312
Other governments	13	3,619	3,619	(NA)	3,402	7,431
Nonmilitary	(NA)	20,545	20,545	(1)	35,608	101,125
Aircraft engines and parts	(NA)	12,802	12,125	677	13,870	22,276
Military	(NA)	3,240	3,240	(NA)	5,305	4,533
Nonmilitary	(NA)	9,562	8,885	677	8,565	17,743
Missile systems and parts, excluding propulsion units	(NA)	9,522	9,522	(2)	9,483	12,826
Military	(NA)	9,522	9,522	(NA)	9,483	12,826
U.S. Government	14	7,619	7,619	(NA)	8,266	10,175
Other governments	8	1,903	1,903	(NA)	1,217	2,651
Nonmilitary	(NA)	(2)	(2)	(2)	(2)	(2)
Space vehicle systems and parts, excluding propulsion units	(NA)	11,963	1 211,963	(1 2)	210,029	213,483
Military	(NA)	7,194	7,194	(NA)	5,887	7,726
Nonmilitary	(NA)	4,769	1 24,769	(1 2)	24,142	25,757
U.S. Government	10	2,765	1 22,765	(NA)	22,540	22,302
Other customers	7	2,004	1 22,004	(1 2)	21,602	23,455
Engines and/or propulsion units for missile systems and space vehicles, including parts3	(NA)	3,124	3,083	41	3,051	8,992
Military	(NA)	2,097	2,097	(NA)	1,577	3,376
Nonmilitary	(NA)	1,027	986	41	1,474	5,616
Other aircraft, space vehicle, and missile activities4	(NA)	9,462	8,791	671	9,956	14,606
Military	(NA)	6,224	6,224	(NA)	6,788	9,031
U.S. Government	23	5,333	5,333	(NA)	5,814	7,597
Other governments	13	891	891	(NA)	974	1,434
Nonmilitary	(NA)	3,238	2,567	671	3,168	5,575
U.S. Government	6	509	509	(NA)	523	453
Other customers	10	2,729	2,058	671	2,645	5,122
Research and development (under contract)	(NA)	6,267	6,203	64	7,089	7,234
Military	(NA)	5,657	5,657	(NA)	6,190	6,937
U.S. Government	23	5,468	5,468	(NA)	6,052	6,844
Other governments	8	189	189	(NA)	138	93
Nonmilitary	(NA)	610	546	64	899	297
U.S. Government	12	419	419	(NA)	601	190
Other customers	10	191	127	64	298	107
All other products and services	(NA)	13,444	13,054	390	14,355	15,434
Military	(NA)	8,447	8,447	(NA)	9,252	10,924
U.S. Government	24	7,359	7,359	(NA)	8,227	9,801
Other governments	15	1,088	1,088	(NA)	1,025	1,123
Nonmilitary	(NA)	4,997	4,607	390	5,103	4,510
U.S. Government	11	1,048	1,048	(NA)	1,791	819
Other customers	20	3,949	3,559	390	3,312	3,691
1991						
Total	48	122,485	120,211	2,274	123,862	245,241
Military	(NA)	63,017	63,017	(NA)	67,089	89,517
U.S. Government	39	56,007	56,007	(NA)	60,528	77,369
Other governments	28	7,010	7,010	(NA)	6,561	12,148
Nonmilitary	(NA)	59,468	57,194	2,274	56,773	155,724
U.S. Government	31	10,403	10,403	(NA)	6,652	9,197
Other customers	42	49,065	46,791	2,274	50,121	146,527

See footnotes at end of table.

Table 4. VALUE OF NET NEW ORDERS, NET SALES, AND BACKLOG OF ORDERS OF COMPLETE AIRCRAFT, SPACE VEHICLES, MISSILES, AND SELECTED PARTS: 1992 AND 1991—Continued

[Millions of dollars]

Product description	Number of companies	Net new orders			Shipments (or net sales)	Backlog, end of year
		Total	Prime contract	Subcontract		
1991—Continued						
Complete aircraft and parts.....	(NA)	52,885	¹ 52,885	(¹)	52,925	148,934
Military.....	(NA)	22,140	22,140	(NA)	19,710	32,795
U.S. Government.....	19	18,139	18,139	(NA)	16,049	24,822
Other governments.....	12	4,001	4,001	(NA)	3,661	7,973
Nonmilitary.....	(NA)	30,745	¹ 30,745	(¹)	33,215	116,139
Aircraft engines and parts.....	(NA)	14,605	13,710	895	15,615	24,742
Military.....	(NA)	4,535	4,535	(NA)	5,675	6,354
Nonmilitary.....	(NA)	10,070	9,175	895	9,940	18,388
Missile systems and parts, excluding propulsion units.....	(NA)	8,072	8,072	(²)	8,989	12,571
Military.....	(NA)	8,072	8,072	(NA)	8,989	12,571
U.S. Government.....	15	7,601	7,601	(NA)	8,192	10,989
Other governments.....	7	471	471	(NA)	797	1,582
Nonmilitary.....	(NA)	(²)	(²)	(²)	(²)	(²)
Space vehicle systems and parts, excluding propulsion units.....	(NA)	11,222	^{1 2} 11,222	(^{1 2})	² 10,515	² 11,664
Military.....	(NA)	5,468	5,468	(NA)	6,770	6,221
Nonmilitary.....	(NA)	5,754	^{1 2} 5,754	(^{1 2})	² 3,745	² 5,443
U.S. Government.....	11	3,344	^{1 2} 3,344	(NA)	² 2,467	² 1,632
Other customers.....	7	2,410	^{1 2} 2,410	(^{1 2})	² 1,278	² 3,811
Engines and/or propulsion units for missile systems and space vehicles, including parts ³ ...	(NA)	5,661	5,620	41	3,807	8,422
Military.....	(NA)	1,087	1,087	(NA)	1,869	2,327
Nonmilitary.....	(NA)	4,574	4,533	41	1,938	6,095
Other aircraft, space vehicle, and missile activities ⁴	(NA)	10,121	9,571	550	10,591	14,216
Military.....	(NA)	6,551	6,551	(NA)	7,244	9,679
U.S. Government.....	23	5,170	5,170	(NA)	6,319	8,200
Other governments.....	13	1,381	1,381	(NA)	925	1,479
Nonmilitary.....	(NA)	3,570	3,020	550	3,347	4,537
U.S. Government.....	8	515	515	(NA)	564	456
Other customers.....	11	3,055	2,505	550	2,783	4,081
Research and development (under contract)....	(NA)	5,568	5,475	93	7,162	7,904
Military.....	(NA)	4,778	4,778	(NA)	6,228	7,534
U.S. Government.....	22	4,727	4,727	(NA)	6,152	7,491
Other governments.....	7	51	51	(NA)	76	43
Nonmilitary.....	(NA)	790	697	93	934	370
U.S. Government.....	13	541	541	(NA)	700	218
Other customers.....	12	249	156	93	234	152
All other products and services.....	(NA)	14,351	13,656	695	14,258	16,788
Military.....	(NA)	10,386	10,386	(NA)	10,604	12,036
U.S. Government.....	25	9,284	9,284	(NA)	9,530	10,976
Other governments.....	16	1,102	1,102	(NA)	1,074	1,060
Nonmilitary.....	(NA)	3,965	3,270	695	3,654	4,752
U.S. Government.....	12	1,408	1,408	(NA)	1,243	1,384
Other customers.....	20	2,557	1,862	695	2,411	3,368

Note: Net new orders represent new orders received during the year, less terminations during the year. In some cases current backlog will not equal the backlog for the previous period, plus current net new orders, minus current shipments. This is primarily due to respondents changing their accounting procedures from one year to the next. The data for these respondents were not changed to force a balance. Significant imbalances due to reporting errors were investigated and corrected.

(NA) Not available.

¹"Net new orders under subcontract" are included with "Prime contract net new orders" to avoid disclosing figures for individual companies.

²Data for "Nonmilitary missile systems and parts" are included with data for "Nonmilitary space vehicle systems and parts."

³Data for "Engines and/or propulsion units for space vehicles, including parts," are included with data for "Engines and/or units for missile systems, including parts."

⁴Data for "Other missile activities" are included with data for "Other aircraft and space vehicles."

HISTORICAL NOTE

Data on the development and production of aerospace products have been collected by the Bureau of the Census since 1948. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959), available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

FUNDING

This survey is funded by the Aerospace Industries Association of America, Incorporated.

CONTACT FOR DATA USERS

For additional information about these data, contact Lynn Sizemore, 301-763-5547 or Robert Wright, 301-763-5573.

11.2 CIVIL AIRCRAFT AND ENGINES

INTRODUCTION

These data cover the manufacture of complete civilian aircraft and aircraft engines in the United States. Parts sold separately are excluded.

SUMMARY OF FINDINGS

In 1992, the value of complete civil aircraft shipments increased by 7 percent to \$31,733.0 million, from the 1991 level of \$29,780.4 million. Shipments of complete civil aircraft engines increased by 6 percent to \$6,114.1 million, from the 1991 level of \$5,778.4 million.

EXPLANATION OF TERMS

Shipments. Represents physical shipments from domestic establishments. All products sold, transferred to other plants of the same company, or shipped on consignment are included whether for domestic use or export. Products bought and resold without further manufacture are excluded.

Aircraft. Includes lighter-than-air aircraft (balloons and airships), as well as heavier-than-air aircraft, however propelled, but does not include spacecraft.

Military. Refers to new aircraft and aircraft engines built for military applications, whether for tactical, strategic, or support functions. All aircraft and aircraft engines built for nonmilitary applications are considered as nonmilitary, or civil, and are reported in this survey.

Civil. This term refers to all aircraft and aircraft engines not built for military applications. All civil (including general aviation and commercial type) aircraft, regardless of end use, are included.

Fixed-Wing (Powered) Aircraft. Aircraft having wings fixed to the airplane fuselage, which are outspread in flight and powered by engines.

Rotary Lift Aircraft. Any heavier-than-air aircraft that depends principally for its support in flight on the lift generated by one or more rotors (helicopters, auto-giros, etc.).

Turbofan. A turbojet engine whose thrust has been increased by the addition of a low pressure compressor (fan). The turbofan engine can have an oversized low-pressure compressor at the front with part of the flow bypassing the rest of the engine (front fan or forwardfan) or it can have a separate fan driven by a turbine stage (aft-fan).

Turbojet. Jet engines incorporating a turbine-driven air compressor to take in and compress the air for the combustion (or the heated air) being used both to rotate the turbine and to create a thrust-producing jet.

Turboprop. Engines in which the main propulsive force is supplied by a gas turbine-driven conventional propeller. Additional propulsive force may be supplied from the discharge turbine exhaust gas.

Table 5. QUANTITY AND VALUE OF SHIPMENTS OF COMPLETE CIVIL AIRCRAFT: 1992 AND 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Total companies	Quantity	Value
1992				
37215 00	Complete civil aircraft	30	2,517	31,733,026
	Civil aircraft (fixed wing, powered)	18	1,539	31,577,498
	Unladen weight not exceeding 2,000 kg (4,409 lb):			
37215 01	Single engine AND	13		
37215 03	Multiengine	3	718	453,340
37215 05	Unladen weight exceeding 2,000 kg (4,409 lb), but not exceeding 15,000 kg (33,069 lb)	4	211	855,762
37215 07	Unladen weight exceeding 15,000 kg (33,069 lb)	3	610	30,268,396
	Helicopters (rotary wing)	7	308	144,000
37215 32	Unladen weight not exceeding 2,000 kg (4,409 lb) AND	6		
37215 34	Unladen weight exceeding 2,000 kg (4,409 lb)	2	308	144,000
	Other civil aircraft (nonpowered) and kits	7	670	11,528
37215 35	Balloons, dirigibles, and airships AND	4		
37215 37	Gliders, sailplanes AND	2		
37215 39	Other aircraft, including aircraft sold in kits, and hang gliders ..	1	670	11,528
1991				
37215 00	Complete civil aircraft	28	2,867	29,780,358
	Civil aircraft (fixed wing, powered)	17	1,598	29,550,973
	Unladen weight not exceeding 2,000 kg (4,409 lb):			
37215 01	Single engine AND	12		
37215 03	Multiengine	3	763	596,904
37215 05	Unladen weight exceeding 2,000 kg (4,409 lb), but not exceeding 15,000 kg (33,069 lb)	5	221	802,967
37215 07	Unladen weight exceeding 15,000 kg (33,069 lb)	3	614	28,151,102
	Helicopters (rotary wing)	7	'574	'218,691
37215 32	Unladen weight not exceeding 2,000 kg (4,409 lb) AND	5		
37215 34	Unladen weight exceeding 2,000 kg (4,409 lb)	2	'574	'218,691
	Other civil aircraft (nonpowered) and kits	6	695	10,694
37215 35	Balloons, dirigibles, and airships AND	4		
37215 37	Gliders, sailplanes AND	1		
37215 39	Other aircraft, including aircraft sold in kits, and hang gliders ..	1	695	10,694

'Revised by 5 percent or more from previously published figures.

Table 6. **QUANTITY AND VALUE OF SHIPMENTS OF COMPLETE CIVIL AIRCRAFT ENGINES: 1992 AND 1991**

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Total companies	Quantity	Value
1992				
37242 00	Complete civil aircraft engines	8	10,061	6,114,094
37242 01	Spark-ignition reciprocating or rotary internal combustion AND	3		
	Turbojet and turbofan:			
37242 03	Of a thrust not exceeding 25 kN (5,620 lb) AND	1		
37242 05	Of a thrust exceeding 25 kN (5,620 lb) AND	4		
	Turboshaft (turbo propeller):			
37242 07	Of a power not exceeding 1,100 kW (820 hp) AND	4		
37242 09	Of a power exceeding 1,100 kW (820 hp)	3	10,061	6,114,094
1991				
37242 00	Complete civil aircraft engines	8	11,195	5,778,444
37242 01	Spark-ignition reciprocating or rotary internal combustion AND	3		
	Turbojet and turbofan:			
37242 03	Of a thrust not exceeding 25 kN (5,620 lb) AND	1		
37242 05	Of a thrust exceeding 25 kN (5,620 lb)	4	10,018	5,465,954
	Turboshaft (turbo propeller):			
37242 07	Of a power not exceeding 1,100 kW (820 hp) AND	4		
37242 09	Of a power exceeding 1,100 kW (820 hp)	3	1,177	312,490

kN - Kilonewtons. kW - Kilowatts.

Table 7. QUANTITY AND VALUE OF SHIPMENTS OF COMPLETE CIVIL AIRCRAFT: 1992

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Total companies	January		February		March		April		May		June	
			Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
37215 00	Complete civil aircraft.....	30	204	2,027,517	'196	2,784,662	'233	3,258,106	'216	2,816,802	'203	2,738,197	'234	3,343,721
	Civil aircraft (fixed wing, powered). Unladen weight not exceeding 2,000 kg (4,409 lb):	18	'117	2,006,961	'117	2,778,884	'152	3,243,622	'125	2,808,823	'128	2,723,484	'150	3,328,886
37215 01	Single engine AND	13	'53	'30,381	'52	55,248	'63	39,066	'54	33,710	'59	30,753	'72	57,748
37215 03	Multitengine.....	3												
37215 05	Unladen weight exceeding 2,000 kg (4,409 lb), but not exceeding 15,000 kg (33,069 lb).....	4	'22	93,708	'14	'49,717	'21	81,329	'17	71,730	'13	'42,341	'16	'63,509
37215 07	Unladen weight exceeding 15,000 kg (33,069 lb).....	3	42	1,882,872	51	2,673,919	68	3,123,227	54	2,703,383	56	2,650,390	62	3,207,629
37215 31	Helicopters (rotary wing) ¹	7	'34	'19,072	'24	'4,853	'30	'13,641	36	'7,049	'19	'13,697	'32	'14,015
37215 36	Other civil aircraft (nonpowered) and kits ²	7	'53	'854	'55	925	'51	'843	'55	930	56	'1,016	52	820
			July		August		September		October		November		December	
37215 00	Complete civil aircraft.....	30	'205	2,350,036	'196	2,012,922	'212	2,458,064	'195	2,455,422	'198	2,452,065	225	3,035,512
	Civil aircraft (fixed wing, powered). Unladen weight not exceeding 2,000 kg (4,409 lb):	18	'131	2,343,350	'121	1,999,620	'132	2,443,891	'117	2,441,378	'112	2,437,329	137	3,021,270
37215 01	Single engine AND	13	'61	25,312	'72	37,355	'60	19,575	'59	34,721	'50	30,998	'63	'58,473
37215 03	Multitengine.....	3												
37215 05	Unladen weight exceeding 2,000 kg (4,409 lb), but not exceeding 15,000 kg (33,069 lb).....	4	'19	80,384	'16	67,483	'25	'103,036	'14	52,469	'17	73,263	'17	'76,793
37215 07	Unladen weight exceeding 15,000 kg (33,069 lb).....	3	51	2,237,654	33	1,894,782	47	2,321,280	44	2,354,188	45	2,333,068	57	2,886,004
37215 31	Helicopters (rotary wing) ¹	7	24	'5,882	'16	'12,234	'23	'13,120	21	'12,977	26	'13,662	23	13,168
37215 36	Other civil aircraft (nonpowered) and kits ²	7	'50	'804	59	'1,068	57	'1,053	57	'1,067	60	'1,074	'65	'1,074

¹Revised by 5 percent or more from previously published figures.²Includes product codes 37215 32 "Helicopters, unladen weight not exceeding 2,000 kg (4,409 lbs)" and 37215 34, "Helicopters, unladen weight exceeding 2,000 kg (4,409 lb)."³Includes product codes 37215 35 "Balloons, dirigibles, and airships"; 37215 37 "Glinters, sailplanes"; and 37215 39, "Other aircraft, including aircraft sold in kits, including hang gliders."

Table 8. QUANTITY AND VALUE OF SHIPMENTS OF COMPLETE CIVIL AIRCRAFT: 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Total companies	January		February		March		April		May		June	
			Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
37215 00	Complete civil aircraft	28	237	1,972,486	221	2,103,025	241	2,121,970	238	2,667,466	247	2,696,335	268	3,007,215
	Civil aircraft (fixed wing, powered)	17	132	1,958,632	126	2,088,283	134	2,098,819	132	2,651,316	134	2,677,647	151	2,979,648
	Unladen weight not exceeding 2,000 kg (4,409 lb):													
37215 01	Single engine AND	12	67	28,321	57	37,233	72	58,251	60	35,485	65	53,599	72	71,772
37215 03	Multiengine	3												
37215 05	Unladen weight exceeding 2,000 kg (4,409 lb), but not exceeding 15,000 kg (33,069 lb)	5	24	95,959	22	77,522	15	52,689	18	64,219	15	55,559	17	63,251
37215 07	Unladen weight exceeding 15,000 kg (33,069 lb)	3	41	1,834,352	47	1,973,528	47	1,987,879	54	2,551,612	54	2,568,449	62	2,844,405
37215 31	Helicopters (rotary wing) ¹	7	47	12,962	'39	'13,909	'50	'22,214	'54	'15,344	'55	'17,730	'56	'26,587
37215 36	Other civil aircraft (nonpowered) and kits ²	6	58	892	56	833	57	937	52	806	58	958	61	980
			July		August		September		October		November		December	
37215 00	Complete civil aircraft	28	237	2,443,392	216	2,416,708	246	2,685,016	249	2,548,137	228	2,607,744	239	2,510,864
	Civil aircraft (fixed wing, powered)	17	122	2,418,555	116	2,401,642	142	2,659,894	143	2,532,925	122	2,592,549	144	2,491,063
	Unladen weight not exceeding 2,000 kg (4,409 lb):													
37215 01	Single engine AND	12	55	33,073	56	45,186	65	61,626	66	57,133	57	38,237	71	77,038
37215 03	Multiengine	3												
37215 05	Unladen weight exceeding 2,000 kg (4,409 lb), but not exceeding 15,000 kg (33,069 lb)	5	17	56,810	15	51,113	18	62,776	24	94,153	'16	55,616	20	72,990
37215 07	Unladen weight exceeding 15,000 kg (33,069 lb)	3	50	2,328,672	45	2,305,343	59	2,535,492	53	2,381,639	49	2,498,696	53	2,341,035
37215 31	Helicopters (rotary wing) ¹	7	'55	'23,929	'42	'14,163	42	'24,155	51	14,433	'46	'14,328	37	18,937
37215 36	Other civil aircraft (nonpowered) and kits ²	6	60	908	58	903	62	967	55	779	60	867	58	864

¹Revised by 5 percent or more from previously published figures.²Includes product codes 37215 32 "Helicopters, unladen weight not exceeding 2,000 kg (4,409 lbs)" and 37215 34 "Helicopters, unladen weight exceeding 2,000 kg (4,409 lb)."³Includes product codes 37215 35 "Balloons, dirigibles, and airships"; 37215 37 "Giders, sailplanes"; and 37215 39, "Other aircraft, including aircraft sold in kits, including hang gliders."

Table 9. QUANTITY AND VALUE OF SHIPMENTS OF COMPLETE CIVIL AIRCRAFT ENGINES: 1992 AND 1991

[Quantity in number of units; value in thousands of dollars]

Product code	Product description	Total companies	January		February		March		April		May		June	
			Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1992														
37242 00	Complete civil aircraft engines Spark-ignition reciprocating or rotary internal-combustion AND Turbojet and turbofan: Of a thrust not exceeding 25 kN (5,620 lb) AND Of a thrust exceeding 25 kN (5,620 lb) AND Turboshaft (turbo propeller) ¹	8	534	262,491	684	459,881	888	566,809	822	477,791	825	501,598	980	605,809
37242 01		3												
37242 03		1												
37242 05		4												
37242 08		4	534	262,491	684	459,881	888	566,809	822	477,791	825	501,598	980	605,809
			July		August		September		October		November		December	
37242 00	Complete civil aircraft engines Spark-ignition reciprocating or rotary internal-combustion AND Turbojet and turbofan: Of a thrust not exceeding 25 kN (5,620 lb) AND Of a thrust exceeding 25 kN (5,620 lb) AND Turboshaft (turbo propeller) ¹	8	870	383,865	802	422,999	959	599,246	769	455,460	949	568,999	979	809,146
37242 01		3												
37242 03		1												
37242 05		4												
37241 08		4	870	383,865	802	422,999	959	599,246	769	455,460	949	568,999	979	809,146
			January		February		March		April		May		June	
37242 00	Complete civil aircraft engines Spark-ignition reciprocating or rotary internal-combustion AND Turbojet and turbofan: Of a thrust not exceeding 25 kN (5,620 lb) AND Of a thrust exceeding 25 kN (5,620 lb) Turboshaft (turbo propeller) ¹	8	814	209,606	968	397,897	1,118	469,189	939	447,065	918	464,191	885	502,474
37242 01		3												
37242 03		1												
37242 05		4												
37242 08		4	736	192,700	880	377,804	1,016	442,522	834	417,503	814	437,729	785	480,103
			78	16,906	88	20,093	102	26,667	105	29,562	104	26,462	100	22,371
			July		August		September		October		November		December	
37242 00	Complete civil aircraft engines Spark-ignition reciprocating or rotary internal-combustion AND Turbojet and turbofan: Of a thrust not exceeding 25 kN (5,620 lb) AND Of a thrust exceeding 25 kN (5,620 lb) Turboshaft (turbo propeller) ¹	8	761	370,461	846	444,267	1,111	565,654	797	549,070	926	589,373	1,112	768,697
37242 01		3												
37242 03		1												
37242 05		4												
37242 08		4	661	342,300	760	422,733	1,012	534,769	708	524,655	832	561,685	980	731,451
			100	28,161	86	21,534	99	30,885	89	24,415	94	26,188	132	37,246

kN - Kilonewtons. kW - Kilowatts. ¹Revised by 5 percent or more from previously published figures.¹Includes product codes 37242 07, "Of a power not exceeding 1,100 kW (820 hp)," and 37242 09, "Of a power exceeding 1,100 kW (820 hp)."

Table 10. **SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF COMPLETE CIVIL AIRCRAFT AND AIRCRAFT ENGINES: 1992**

[Quantity in number of units; value in thousands of dollars]

Product code ¹	Product description	Manufacturers' shipments		Exports of domestic merchandise ^{1 2}		Imports for consumption ^{1 3}	
		Quantity	Value (f.o.b. plant)	Quantity	Value at port	Quantity	Value
37215 02	Civil aircraft (fixed wing, powered): Unladen weight not exceeding 2,000 kg (4,409 lb)	718	453,340	347	51,994	96	27,963
37215 05	Unladen weight exceeding 2,000 kg (4,409 lb), but not exceeding 15,000 kg (33,069 lb)	211	855,762	176	534,226	144	1,359,628
37215 07	Unladen weight exceeding 15,000 kg (33,069 lb)	610	30,268,396	387	22,378,685	64	2,020,376
37215 31	Helicopters (rotary wing)	308	144,000	212	117,693	148	180,126
37242 00	Complete civil aircraft engines	10,061	6,114,094	2,838	2,226,471	2,575	2,615,061

¹For comparison of Standard Industrial Classification-based product codes, Schedule B numbers, and HTSUSA numbers, see appendix B.²Source: Bureau of the Census report EM 545, *U.S. Exports*.³Source: Bureau of the Census report IM 145, *U.S. Imports for Consumption*.**HISTORICAL NOTE**

Data on civilian aircraft and aircraft engines have been collected by the Bureau of the Census since 1946. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. Historical data are also available on microfiche; contact Data User Services Division, 301-763-4100.

CONTACT FOR DATA USERS

For additional information about these data, contact Carol Beasley, 301-763-5353 or Indrek Grabbi, 301-763-5453.

Date		Description		Amount	
1890	Jan 1	Balance		100.00	
	Jan 15	Received from John Doe		50.00	
	Feb 1	Received from Jane Smith		25.00	
	Feb 15	Received from Mr. Brown		75.00	
	Mar 1	Received from Mrs. Green		30.00	
	Mar 15	Received from Mr. White		100.00	
	Apr 1	Received from Mr. Black		40.00	
	Apr 15	Received from Mr. Grey		60.00	
	May 1	Received from Mr. Blue		20.00	
	May 15	Received from Mr. Yellow		80.00	
	Jun 1	Received from Mr. Purple		15.00	
	Jun 15	Received from Mr. Pink		90.00	
	Jul 1	Received from Mr. Brown		35.00	
	Jul 15	Received from Mr. Green		55.00	
	Aug 1	Received from Mr. White		45.00	
	Aug 15	Received from Mr. Black		65.00	
	Sep 1	Received from Mr. Grey		25.00	
	Sep 15	Received from Mr. Blue		70.00	
	Oct 1	Received from Mr. Yellow		10.00	
	Oct 15	Received from Mr. Purple		85.00	
	Nov 1	Received from Mr. Pink		30.00	
	Nov 15	Received from Mr. Brown		60.00	
	Dec 1	Received from Mr. Green		40.00	
	Dec 15	Received from Mr. White		95.00	
	Total			1000.00	

APPENDIX A. SURVEY SCOPE AND METHODOLOGY

Survey	Publication period ¹	Reporting requirement (V/M) ²	Title	Survey panel (number)	Received coverage rate ³ /range ⁴	Active response rate ⁵ /range ⁴	Data collected and/or published ⁶
M20A	M	V	Flour Milling Products	129	6	3	P, I
MA20D	A	V	Confectionery	383	8	6	S
M20J	M	M	Fats & Oils: Oilseed Crushings	151	9	8	P, I, C
M20K	M	M	Fats & Oils: Production, Consumption, and Stocks	1143	8	6	P, I, C
MQ22D	Q	V	Consumption on the Woolen System and Worsted Combing ..	94	8	0	C, P
MA22F	A	M	Textured and Spun Yarn Products	634	9	7	P
MA22K	A	M	Knit Fabric Production	616	9	4	P, M
M22P	M	M	Consumption on the Cotton System and Stocks	772	8	8	C, I, M, SH
MA22Q	A	M	Carpet and Rugs	212	9	5	S
MQ22T	Q	M	Broadwoven Fabrics (Gray)	318	9	6	P, M, LH
MQ23A	Q	M	Apparel	1286	7	2	P, SV
MA23D	A	M	Gloves and Mittens	134	9	7	S
MQ23X	Q	V	Sheets, Pillowcases, and Towels	27	9	1	S, P, I, UO
MA31A	A	M	Footwear	269	8	8	S, P
MQ31A	Q	V	Footwear	133	6	4	S, P
MA24T	A	M	Lumber Production and Mill Stocks	2273	8	8	P, I
MA32C	A	M	Refractories	211	8	4	S
MQ32D	Q	V	Clay Construction Products	202	4	1	S, P
MQ34E	Q	V	Plumbing Fixtures	118	9	0	S, I
MA28A	A	M	Inorganic Chemicals	818	8	7	S, P, PC, I
MQ28A	Q	V	Inorganic Chemicals	240	5	3	P, I
MA28B	A	M	Inorganic Fertilizer Materials and Related Products	235	9	8	S, P, PC, I
MQ28B	Q	V	Fertilizer Materials	172	5	2	P, QS, I
MA28C	A	M	Industrial Gases	853	8	7	S, P
MQ28C	Q	V	Industrial Gases	497	5	0	P
MA28F	A	M	Paint, Varnish, and Lacquer	742	8	6	S
MQ28F	Q	V	Paint, Varnish, and Lacquer	221	4	0	S
MA28G	A	M	Pharmaceutical Preparations (Except Biologicals)	486	9	6	SV
MQ32A	Q	V	Flat Glass	5	6	5	S, P
MA32E	A	M	Consumer, Scientific, Technical, and Industrial Glassware ...	239	9	7	S
M32G	M	V	Glass Containers	12	8	1	SQ, P, I
MA33A	A	M	Iron and Steel Castings	613	9	8	S
MA33B	A	M	Steel Mill Products	616	8	6	S, R
M33D	M	V	Aluminum Ingot and Mill Products	206	9	0	SQ, R, I
MA33E	A	M	Nonferrous Castings	730	8	7	S
M33J	M	V	Inventories of Steel-Producing Mills	16	7	0	SQ, I
MA33L	A	M	Insulated Wire and Cable	324	8	6	S
MA35R	A	M	Computers and Office and Accounting Machines	966	9	6	S
MA36A	A	M	Switchgear, Switchboard Apparatus, Relays, and Industrial Control	889	9	9	S
MQ36B	Q	V	Electric Lamps	28	9	0	T, EX, S, I, P
MQ36C	Q	V	Fluorescent Lamp Ballasts	12	9	7	S
MA36K	A	M	Wiring Devices and Supplies	507	8	8	S
MA36L	A	V	Electric Lighting Fixtures	408	9	8	S
MA36P	A	M	Communication Equipment	1343	9	8	S
MA36Q	A	M	Semiconductors, Printed Circuit Boards, and Related Equipment	2828	8	7	S
MA38B	A	M	Selected Instruments and Related Products	2664	8	7	S
MA38R	A	M	Electromedical and Irradiation Equipment	251	8	7	S
MA36E	A	M	Electric Housewares and Fans	99	8	3	S
MA36F	A	M	Major Household Appliances	137	9	6	S
MA36M	A	M	Consumer Electronics	179	9	8	S
MQ34K	Q	V	Steel Shipping Drums and Pails	50	7	1	S

See footnotes at end of table.

Survey	Publication period ¹	Reporting requirement (V/M) ²	Title	Survey panel (number)	Received coverage rate ³ /range ⁴	Active response rate ⁵ /range ⁴	Data collected and/or published ⁶
MA35J	A	M	Selected Industrial Air Pollution Control Equipment	124	7	5	NOQ, NOV, S, UO, UOQ
MA35M	A	M	Air-Conditioning and Refrigeration Equipment	357	8	6	S
MA35N	A	M	Fluid Power Products, Including Aerospace	635	7	6	S
MA35P	A	M	Pumps and Compressors	422	8	6	S
MA35Q	A	M	Antifriction Bearings	143	8	8	S
MA35U	A	V	Vending Machines (Coin-Operated)	55	9	5	S
MA36H	A	M	Motors and Generators	380	9	9	S
MA35A	A	M	Farm Machinery and Lawn and Garden Equipment	781	8	6	S
MA35D	A	M	Construction Machinery	273	9	7	S
MA35F	A	M	Mining Machinery, Mineral Processing Equipment	157	9	7	S
MA35L	A	M	Internal Combustion Engines	50	9	7	PC, IPT, S, CC, P
MQ35W	Q	V	Metalworking Machinery	454	8	2	S, UO
M37L	M	V	Truck Trailers	147	7	3	S
MA37D	A	M	Aerospace Orders	76	9	9	NOV, R, UO
M37G	M	V	Civil Aircraft and Engines	25	8	4	S

- Represents zero.

¹Publication period: A = annual; M = monthly (data reflects twelfth month); Q = quarterly (data reflects fourth quarter)

²Reporting requirement will be either voluntary or mandatory, V or M, respectively.

³Received coverage rate is the ratio of value of shipments of establishments responding to the survey to the total value of shipments of that survey. For example, the 75 to 79 percent response in the M37G survey accounts for between 95 and 98 percent of the total value of shipments of the products collected in that survey.

⁴Coverage and response rate ranges:

Response Rate	Range (percent)
9	99+
8	95 to 98
7	90 to 94
6	85 to 89
5	80 to 84
4	75 to 79
3	70 to 74
2	65 to 69
1	60 to 64
0	59 or less

⁵Active response rate is the ratio of the number of establishments responding to the survey to the total active establishments of that survey. For monthly and quarterly surveys this is calculated on the monthly or quarterly portion rather than the mandatory annual counterpart. Both the response rate and coverage rate would be higher if the annual portion were included.

⁶Data collected and/or published:

Code	Description	Code	Description
C	Consumption	SV	Shipments (value)
I	Inventory (stock)	UO	Unfilled (backlog) Orders (value)
NOQ	New Orders (quantity)	UOQ	Unfilled (backlog) Orders (quantity)
NOV	New Orders (value)	M	Machinery in Place
P	Production (quantity)	EX	Exports
PC	Produced and Consumed (quantity)	IPT	Interplant Transfers
PV	Production (value)	T	Total (shipments and exports)
R	Receipts (value)	CC	Total (commercial shipments)
S	Shipments (quantity and value)	LH	Loom Hours
SQ	Shipments (quantity)	SH	Spindle Hours

APPENDIX B. FOREIGN TRADE CONCORDANCE

COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992

Product code	Product description	Export number ¹	Import number ²
	FOOD PRODUCTS		
20642	Total, chocolate and chocolate-type confectionery products	1806.31.0000, 1806.32.0000, 1806.90.0000	1806.31.0030, 1806.31.0045, 1806.31.0050, 1806.31.0060, 1806.31.0090, 1806.32.2030, 1806.32.2045, 1806.32.2050, 1806.32.2060, 1806.32.2090, 1806.32.4020, 1806.32.4040, 1806.32.4045, 1806.32.4048, 1806.32.4050, 1806.32.4060, 1806.32.4080, 1806.90.0010, 1806.90.0020, 1806.90.0030, 1806.90.0040, 1806.90.0045, 1806.90.0050, 1806.90.0055, 1806.90.0060, 1806.90.0070, 1806.90.0075, 1806.90.0080, 1806.90.0085, 1806.90.0090
20643	Total, nonchocolate confectionery products	1704.90.7000, 1704.90.3000	1704.90.2005, 1704.90.2010, 2106.90.6085
20669 81	Cocoa butter	1804.00.0000	1804.00.0000
20661 11, 21	Chocolate coatings (blocks, wafers, and liquids)	1806.20.6000	1802.06.0000
20661 14, 20669 12, 13, 61	Other chocolate and cocoa products	1803.10.0000, 1803.20.0000, 1805.00.0000, 1806.10.0000, 1806.20.9000	1803.10.0000, 1803.20.0000, 1805.00.0000, 1806.10.2090, 1806.10.3000, 1806.10.2030, 1806.10.3005, 1806.10.3010, 1806.10.3030, 1806.10.4000, 1806.20.2000, 1806.20.4020, 1806.20.4040, 1806.20.4060, 1806.20.7000, 1806.20.7005, 1806.20.7010, 1806.20.7030, 1806.20.8045, 1806.20.8090, 1806.20.8010, 1806.20.8020, 1806.20.8030, 1806.20.8040, 1806.20.8050, 1806.20.8060, 1806.20.8070, 1806.20.8080
20741 11	Cottonseed oil: Crude	1512.21.0000	1512.21.0000
20742 11	Refined	1512.29.0020	1512.29.0020
20751 11	Soybean oil: Crude	1507.10.0000	1507.10.0000
20751 21	Refined	1507.90.4020	1507.90.4020
20460 61	Corn oil: Crude	1515.21.0000	1515.21.0000
20460 65	Refined	1515.29.0020	1515.29.0020
20762 52	Peanut oil: Crude	1508.10.0000	1508.10.0000
20762 57	Refined	1508.90.0000	1508.90.0000
20115 13	Lard	1501.00.0020	1501.00.0020
20110 41	Edible tallow	1502.00.0020	1502.00.0020
20761 11	Linseed oil (crude)	1515.11.0000	1515.11.0000
20771 12	Inedible tallow and grease	1502.00.0040, 1503.00.0000	1502.00.0040, 1503.00.0000
20762 47	Palm oil	1511.10.0000, 1511.90.0000	1511.10.0000, 1511.90.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
	TEXTILES, APPAREL, AND FOOTWEAR		
(NA)	85 percent or more carded cotton spun yarn	5205.11.0000, 5205.12.0000, 5205.13.0000, 5205.14.0000, 5205.15.0000, 5205.31.0000, 5205.32.0000, 5205.33.0000, 5205.34.0000, 5205.35.0000, 5207.10.0000	5205.11.1000, 5205.11.2000, 5205.12.1000, 5205.12.2000, 5205.13.1000, 5205.13.2000, 5205.14.1000, 5205.14.2000, 5205.15.1000, 5205.15.2000, 5205.31.0000, 5205.32.0000, 5205.33.0000, 5205.34.0000, 5205.35.0000, 5207.10.0000
(NA)	85 percent or more combed cotton spun yarn	5205.21.0000, 5205.22.0000, 5205.23.0000, 5205.24.0000, 5205.25.0000, 5205.41.0000, 5205.42.0000, 5205.43.0000, 5205.44.0000, 5205.45.0000	5205.21.0000, 5205.22.0000, 5205.23.0000, 5205.24.0000, 5205.25.0000, 5205.41.0000, 5205.42.0000, 5205.43.0000, 5205.44.0000, 5205.45.0000
(NA)	Chiefly carded cotton blends	5206.11.0000, 5206.12.0000, 5206.13.0000, 5206.14.0000, 5206.15.0000, 5206.31.0000, 5206.32.0000, 5206.33.0000, 5206.34.0000, 5206.35.0000	5206.11.0000, 5206.12.0000, 5206.13.0000, 5206.14.0000, 5206.15.0000, 5206.31.0000, 5206.32.0000, 5206.33.0000, 5206.34.0000, 5206.35.0000
(NA)	Chiefly combed cotton blends	5206.21.0000, 5206.22.0000, 5206.23.0000, 5206.24.0000, 5206.25.0000, 5206.41.0000, 5206.42.0000, 5206.43.0000, 5206.44.0000, 5206.45.0000	5206.21.0000, 5206.22.0000, 5206.23.0000, 5206.24.0000, 5206.25.0000, 5206.41.0000, 5206.42.0000, 5206.43.0000, 5206.44.0000, 5206.45.0000
(NA)	Wool spun on woolen system	5106.10.0000, 5106.20.0000	5106.10.0010, 5106.10.0090, 5106.20.0000
(NA)	Wool spun on worsted system	5107.10.0000, 5107.20.2000	5107.10.0000, 5107.20.2000
(NA)	Cellulosic manmade spun yarn	5510.11.0000, 5510.12.0000, 5510.20.0000, 5510.30.0000, 5510.90.0000, 5510.90.0000	5510.11.0000, 5510.12.0000, 5510.20.0000, 5510.30.0000, 5510.90.2000, 5510.90.4000
(NA)	85 percent or more polyester spun yarn	5509.21.0000, 5509.22.0000	5509.21.0000, 5509.22.0010, 5509.22.0090
(NA)	Other chiefly polyester blend spun yarn	5509.51.0000, 5509.52.0000, 5509.53.0000, 5509.59.0000	5509.51.3000, 5509.51.6000, 5509.52.0000, 5509.53.0030, 5509.53.0060, 5509.59.0000
(NA)	85 percent or more acrylic spun yarn	5509.31.0000, 5509.32.0000	5509.31.0000, 5509.32.0000
(NA)	Other chiefly acrylic blend spun yarn	5509.61.0000, 5509.62.0000, 5509.69.0000	5509.61.0000, 5509.62.0000, 5509.69.2000, 5509.69.4000, 5509.69.6000
(NA)	Nylon spun yarn	5509.11.0000, 5509.12.0000	5509.11.0000, 5509.12.0000
(NA)	All other spun yarns, including silk and other natural fibers	5509.42.0000, 5509.99.0000, 5306.10.0000, 5306.20.0000, 5307.10.0000, 5307.20.0000, 5308.10.0000, 5308.20.0000, 5308.30.0000, 5308.90.0000, 5004.00.0000, 5005.00.0000, 5006.00.0000	5509.41.0010, 5509.41.0090, 5509.42.0010, 5509.42.0090, 5509.91.0000, 5509.92.0000, 5509.99.2000, 5509.99.4000, 5509.99.6000, 5306.10.0000, 5306.20.0000, 5307.10.0000, 5307.20.0000, 5308.10.0000, 5308.20.0000, 5308.30.0000, 5308.90.0000, 5004.00.0000, 5005.00.0010, 5005.00.0090, 5006.00.0010, 5006.00.0090
(NA)	Polyester textured, bulk, or crimped filament yarn	5402.33.0000	5402.33.3000, 5402.33.6000
(NA)	Nylon textured, bulk, or crimped filament yarn	5402.31.0000, 5402.32.0000	5402.31.3000, 5402.31.6000, 5402.32.3000, 5402.32.6000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
(NA)	All other textured, bulk, or crimped filament yarn	5402.39.0000, 5403.20.0000	5402.39.3000, 5402.39.3010, 5402.39.3090, 5402.39.6000, 5402.39.6010, 5402.39.6090, 5403.20.3000, 5403.20.6000
22571 03, 22581 01	Long pile knit fabrics	6001.10.0000	6001.10.2000, 6001.10.6000
22571 14, 22581 08	Looped pile knit fabric of cotton fiber	6001.21.0000	6001.21.0000
22571 16, 22581 09	Looped pile knit fabrics of manmade fibers	6001.22.0000	6001.22.0000
22571 19, 22581 13	Looped pile knit fabrics of all other fibers	6001.29.0000	6001.29.0000
22571 23, 22581 16	All other pile knit fabrics of cotton fibers	6001.91.0000	6001.91.0010, 6001.91.0020
22571 24, 22581 17	All other pile knit fabrics of manmade fibers	6001.92.0010	6001.92.0010, 6001.92.0020, 6001.92.0030, 6001.92.0040
22571 28, 22581 19	All other pile knit fabrics	6001.99.0000	6001.99.0000
22571 71, 22581 51	Elastic knit fabric over 12 inches in width	6002.30.0000	6002.30.2000, 6002.30.9000
22581 71	Other warp knit fabrics of cotton fibers	6002.42.0000	6002.42.0000
22581 72	Other warp knit fabrics of wool fibers	6002.41.0000	6002.41.0000
22581 73	Other warp knit fabrics of manmade fibers	6002.43.0010	6002.43.0000
22581 75	Other warp knit fabrics of all other fibers	6002.49.0000	6002.49.0000
22571 83, 22581 93	Elastic knit fabrics 12 inches or less in width	6002.10.4000, 6002.10.8000	6002.10.4000, 6002.10.8000
22571 84, 22581 95	Other narrow knit fabrics	6002.20.3000, 6002.20.6000, 6002.20.9000	6002.20.1000, 6002.20.3000, 6002.20.6000, 6002.20.9000
22571 37, 51, 61	Other knit fabrics of cotton fibers	6002.92.0000	6002.92.0000
22571 38, 52, 62	Other knit fabrics of wool fibers	6002.91.0000	6002.91.0000
22571 53	Other knit fabrics of manmade fibers of double knit construction	6002.93.0000	6002.93.0020, 6002.93.0040, 6002.93.0060
22571 39, 55-56	All other knit fabrics of manmade fibers	(NA)	6002.93.0080
22571 40	Other knit fabrics of all other fibers	6002.99.0000	6002.99.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
22731 00	Woven carpet and rugs	5702.10.0000, 5702.20.0000, 5702.31.0000, 5702.32.0000, 5702.39.0000, 5702.41.0000, 5702.42.0000, 5702.49.0000, 5702.51.0000, 5702.52.0000, 5702.59.0000, 5702.91.0000, 5702.92.0000, 5702.99.0000	5702.10.0000, 5702.10.9010, 5702.10.9020, 5702.10.9030, 5702.10.9090, 5702.20.1000, 5702.20.2000, 5702.31.1000, 5702.31.2000, 5702.32.1000, 5702.32.2000, 5702.39.1000, 5702.39.2010, 5702.39.2090, 5702.41.1000, 5702.41.2000, 5702.42.1000, 5702.42.2010, 5702.42.2090, 5702.49.1010, 5702.49.1090, 5702.49.1500, 5702.49.2000, 5702.51.2000, 5702.51.4000, 5702.52.0000, 5702.59.1000, 5702.59.2000, 5702.91.2000, 5702.91.3000, 5702.91.4000, 5702.92.0010, 5702.92.0090, 5702.99.1010, 5702.99.1090, 5702.99.2000
22732 11	Nylon tufted carpet and rugs	5703.20.0000	5703.20.1000, 5703.20.2010, 5703.20.2090
22732 13	Polyester tufted carpet and rugs	5703.10.0000	5703.10.0000,
22732 19	All other tufted carpet and rugs	5703.30.0000, 5703.90.0000	5703.30.0010, 5703.30.0090, 5703.90.0000
22733 10, 20, 30, 90	All other carpet and rugs	5701.10.0000, 5701.90.0000, 5705.00.0000, 5704.10.0000, 5704.90.0000	5701.10.1300, 5701.10.1600, 5701.10.2010, 5701.10.2090, 5701.90.1010, 5701.90.1020, 5701.90.1030, 5701.90.1090, 5701.90.2010, 5701.90.2020, 5701.90.2030, 5701.90.2090, 5705.00.1000, 5705.00.2010, 5705.00.2020, 5705.00.2030, 5705.00.2090, 5704.10.0000, 5704.90.0000
2211B 02, 42	Cotton cheesecloth and batistes	5208.11.2090, 5208.11.4090, 5208.11.9000, 5208.12.4090, 5208.12.6090, 5208.12.8090, 5208.21.2090, 5208.21.4090, 5208.21.6090, 5208.22.4090, 5208.22.6090, 5208.22.8090, 5208.31.4090, 5208.31.6090, 5208.31.8090, 5208.32.3090, 5208.32.4090, 5208.32.5090, 5208.51.4090, 5208.51.6090, 5208.51.8090, 5208.52.3090, 5208.52.4090, 5208.52.5090, 5210.11.4090, 5210.11.6090, 5210.11.8090, 5210.21.4090, 5210.21.6090, 5210.21.8090, 5210.31.4090, 5210.31.6090, 5210.31.8090, 5210.51.4090, 5210.51.6090, 5210.51.8090	5208.11.2090, 5208.11.4090, 5208.11.6000, 5208.11.8090, 5208.12.4090, 5208.12.6090, 5208.12.8090, 5208.21.2090, 5208.21.4090, 5208.21.6090, 5208.22.4090, 5208.22.6090, 5208.22.8090, 5208.31.4090, 5208.31.6090, 5208.31.8090, 5208.32.3090, 5208.32.4090, 5208.32.5090, 5208.51.8090, 5208.52.3090, 5208.52.4090, 5208.52.5090, 5210.11.4090, 5210.11.6090, 5210.11.8090, 5210.21.4090, 5210.21.6090, 5210.21.8090, 5210.31.4090, 5210.31.6090, 5210.31.8090, 5210.51.4090, 5210.51.6090, 5210.51.8090
2211B 12	Cotton print cloth	5208.11.4060, 5208.12.6060, 5208.21.4060, 5208.22.6060, 5208.31.6060, 5208.32.4060, 5208.51.6060, 5208.52.4060, 5210.11.6060, 5210.21.6060, 5210.31.6060, 5210.51.6060	5208.11.4060, 5208.12.6060, 5208.21.4060, 5208.22.6060, 5208.31.6060, 5208.32.4060, 5208.51.6060, 5208.52.4060, 5210.11.6060, 5210.21.6060, 5210.31.6060, 5210.51.6060
2211B 22	Cotton poplin and broadcloth (5.9 ounces or less per square yard)	5208.11.2020, 5208.11.4020, 5208.11.8020, 5208.12.4020, 5208.12.6020, 5208.12.8020, 5208.21.2020, 5208.21.4020, 5208.21.6020, 5208.22.4020, 5208.22.6020, 5208.22.8020, 5208.31.4020, 5208.31.6020, 5208.31.8020, 5208.32.3020, 5208.32.4020, 5208.32.5020, 5208.51.4020, 5208.51.6020, 5208.51.8020, 5208.52.3020, 5208.52.4020, 5208.52.5020, 5210.11.4020, 5210.11.6020, 5210.11.8020, 5210.21.4020, 5210.21.6020, 5208.21.8020, 5210.31.4020, 5210.31.6020, 5210.31.8020, 5210.51.4020, 5210.51.6020, 5210.51.8020	5208.11.2020, 5208.11.4020, 5208.11.8020, 5208.12.4020, 5208.12.6020, 5208.12.8020, 5208.21.2020, 5208.21.4020, 5208.21.6020, 5208.22.4020, 5208.22.6020, 5208.22.8020, 5208.31.4020, 5208.31.6020, 5208.31.8020, 5208.32.3020, 5208.32.4020, 5208.32.5020, 5208.51.4020, 5208.51.6020, 5208.51.8020, 5208.52.3020, 5208.52.4020, 5208.52.5020, 5210.11.4020, 5210.11.6020, 5210.11.8020, 5210.21.4020, 5210.21.6020, 5208.21.8020, 5210.31.4020, 5210.31.6020, 5210.31.8020, 5210.51.4020, 5210.51.6020, 5210.51.8020
2211B 32, 36	Cotton poplin and broadcloth (more than 5.9 ounces per square yard)	5209.11.0020, 5209.21.0020, 5209.31.6020, 5209.51.6020, 5211.11.0020, 5211.21.0020, 5211.31.0020, 5211.51.0020	5209.11.0020, 5209.21.0020, 5209.31.6020, 5209.51.6020, 5211.11.0020, 5211.21.0020, 5211.31.0020, 5211.51.0020

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
2211B 71	Cotton duck	5209.11.0090, 5209.21.0090, 5209.31.6090, 5209.51.6090, 5211.11.0090, 5211.21.0090, 5211.31.0090, 5211.51.0090	5209.11.0090, 5209.19.0060, 5209.21.0090, 5209.29.0060, 5209.31.6090, 5209.39.0060, 5209.51.6090, 5209.59.0060, 5211.11.0090, 5211.19.0060, 5211.21.0090, 5211.29.0060, 5211.31.0090, 5211.39.0060, 5211.51.0090, 5211.59.0060
2211B 51, 62, 64, 66	Cotton sheeting	5208.11.2040, 5208.11.4040, 5208.12.4040, 5208.12.6040, 5208.21.2040, 5208.21.4040, 5208.22.4040, 5208.22.6040, 5208.31.4040, 5208.31.6040, 5208.32.3040, 5208.32.4040, 5208.51.4040, 5208.51.6040, 5208.52.3040, 5208.52.4040, 5209.11.0040, 5209.21.0040, 5209.31.6040, 5209.51.6040, 5210.11.4040, 5210.11.6040, 5210.21.4040, 5210.21.6040, 5210.31.4040, 5210.31.6040, 5210.51.4040, 5210.51.6040, 5211.11.0040, 5211.21.0040, 5211.31.0040, 5211.51.0040	5208.11.2040, 5208.11.4040, 5208.12.4040, 5208.12.6040, 5208.21.2040, 5208.21.4040, 5208.22.4040, 5208.22.6040, 5208.31.4040, 5208.31.6040, 5208.32.3040, 5208.32.4040, 5208.51.4040, 5208.51.6040, 5208.52.3040, 5208.52.4040, 5209.11.0030, 5209.11.0050, 5209.21.0030, 5209.21.0050, 5209.31.6030, 5209.31.6050, 5209.51.6030, 5209.51.6050, 5210.11.4040, 5210.11.6040, 5210.21.4040, 5210.21.6040, 5210.31.4040, 5210.31.6040, 5210.51.4040, 5210.51.6040, 5211.11.0030, 5211.11.0050, 5211.21.0030, 5211.21.0050, 5211.31.0030, 5211.31.0050, 5211.51.0030, 5211.51.0050
2211C 05, 12, 22, 32, 34	Cotton twills and sateens	5208.13.0000, 5208.19.2000, 5208.23.0000, 5208.29.2000, 5208.33.0000, 5208.39.2000, 5208.53.0000, 5208.59.2000, 5209.12.0000, 5209.19.0030, 5209.22.0000, 5209.29.0030, 5209.32.0000, 5209.39.0030, 5209.52.0000, 5209.59.0030, 5210.12.0000, 5210.19.2000, 5210.22.0000, 5210.29.2000, 5210.32.0000, 5210.39.2000, 5210.52.0000, 5210.59.2000, 5211.12.0000, 5211.19.0030, 5211.22.0000, 5211.29.0030, 5211.32.0000, 5211.39.0030, 5211.52.0000, 5211.59.0030	5208.13.0000, 5208.19.2020, 5208.19.2090, 5208.23.0000, 5208.29.2020, 5208.29.2090, 5208.33.0000, 5208.39.2020, 5208.39.2090, 5208.53.0000, 5208.59.2020, 5208.59.2090, 5209.12.0020, 5209.12.0040, 5209.19.0020, 5209.19.0040, 5209.22.0020, 5209.22.0040, 5209.29.0020, 5209.29.0040, 5209.32.0020, 5209.32.0040, 5209.39.0020, 5209.39.0040, 5209.52.0020, 5209.52.0040, 5209.59.0020, 5209.59.0040, 5210.12.0000, 5210.19.2020, 5210.19.2090, 5210.22.0000, 5210.29.2020, 5210.29.2090, 5210.32.0000, 5210.39.2020, 5210.39.2090, 5210.52.0000, 5210.59.2020, 5210.59.2090, 5211.12.0020, 5211.12.0040, 5211.19.0020, 5211.19.0040, 5211.22.0020, 5211.22.0040, 5211.29.0020, 5211.29.0040, 5211.32.0020, 5211.32.0040, 5211.39.0020, 5211.39.0040, 5211.52.0020, 5211.52.0040, 5211.59.0020, 5211.59.0040
2211C 01, 03	Blue denim	5209.42.0020, 5211.42.0020, 5209.42.0020, 5211.42.0040	5209.42.0020, 5211.42.0020, 5209.42.0040, 5211.42.0040
2211E 00	Cotton pile fabrics, including yarn dyed	5801.21.0000-5801.26.0000, 5802.11.0000-5802.30.9000	5801.21.0000-5801.26.0020, 5802.11.0000, 5802.19.0000, 5802.20.0000, 5802.30.0020, 5802.30.0030, 5802.30.0090
2211X XX	Cotton yarn dyed	5208.41.9000, 5208.42.9000, 5208.43.0000, 5208.49.2000, 5208.49.9000, 5209.41.6070, 5209.43.0000, 5209.49.0000, 5210.41.0000-5210.49.9000, 5211.41.0000, 5211.43.0000, 5211.49.0000	5208.41.4000-5208.41.8000, 5208.42.3000-5208.42.5000, 5208.43.0000-5208.49.8090, 5209.41.6020, 5209.41.6040, 5209.43.0020-5209.49.0090, 5210.41.4000-5210.49.8090, 5211.41.0020, 5211.41.0040, 5211.43.0020-5211.49.0090
2211D 12	Cotton oxfords	(NA)	5208.19.4020, 5208.19.6020, 5208.19.8020, 5208.29.4020, 5208.29.6020, 5208.29.8020, 5208.39.4020, 5208.39.6020, 5208.39.8020, 5208.59.4020, 5208.59.6020, 5208.59.8020, 5210.19.4020, 5210.19.6020, 5210.19.8020, 5210.29.4020, 5210.29.6020, 5210.29.8020, 5210.39.4020, 5210.39.6020, 5210.39.8020, 5210.59.4020, 5210.59.6020, 5210.59.8020

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
2211D 32, 35, 45, 52, 62, 64	All other constructions, chiefly cotton	(NA)	5208.19.4090, 5208.19.6090, 5208.19.8090, 5208.29.4090, 5208.29.6090, 5208.29.8090, 5208.39.4090, 5208.39.6090, 5208.39.8090, 5208.59.4090, 5208.59.6090, 5208.59.8090, 5209.19.0090, 5209.29.0090, 5209.39.0080, 5209.39.0090, 5209.59.0090, 5210.19.4090, 5210.19.6090, 5210.19.8090, 5210.29.4090, 5210.29.6090, 5210.29.8090, 5210.39.4090, 5210.39.6090, 5210.39.8090, 5210.59.4090, 5210.59.6090, 5210.59.8090, 5211.19.0090, 5211.29.0090, 5211.39.0090, 5211.59.0090
2221C 01, 03	Nylon and polyester high tenacity fabrics	5407.10.0000	5407.10.0010, 5407.10.0090
2221B 01	Rayon high tenacity fabrics	5408.10.0000	5408.10.0000
2221C 11	Typewriter fabrics	(NA)	5407.41.0010, 5407.41.0020
2221C 13-33	Other nylon filament fabrics	5407.41.0000-5407.44.0000	5407.41.0030-5407.44.0060
2221B 21-53	Other rayon and acetate filament yarn fabrics	5408.21.0000-5408.24.0000	5408.21.0030-5408.24.0060
2221C 43-45, 50, 62, 66, 73	Other polyester filament yarn fabrics	5407.51.0000, 5407.52.0000, 5407.53.0000, 5407.54.0000, 5407.60.0000	5407.51.0020, 5407.51.0040, 5407.51.0060, 5407.52.2020, 5407.52.2040, 5407.52.2060, 5407.53.2020, 5407.53.2040, 5407.53.2060, 5407.54.0020, 5407.54.0040, 5407.54.0060, 5407.60.2005, 5407.60.2010, 5407.60.2015, 5407.60.2025, 5407.60.2030, 5407.60.2035, 5407.60.2045, 5407.60.2050, 5407.60.2055, 5407.60.2065, 5407.60.2070, 5407.60.2075
2221C 82, 89	Glass fiber fabrics	7019.20.4000	7019.20.2000, 7019.20.5000
2221C 07	85% or more filament yarn fabrics obtained from strip	5407.20.0000	5407.20.0000
2221C 92, 93	All other filament yarn fabrics	5407.71.0000-5407.74.0000	5407.71.0030-5407.74.0060
2221D 04, 08, 43-44	Chiefly manmade fiber cheesecloth, lawns, and batistes	Export data for chiefly manmade fiber spun yarn fabrics are not separately available by type of fabric. The following codes are included in the total: 5512.11.0000-5514.49.0000, 5515.11.0000, 5515.19.0000, 5515.29.0000, 5515.99.0000, 5516.41.0000-5516.94.0000	5512.11.0040, 5512.19.0035, 5512.21.0040, 5512.29.0030, 5512.91.0040, 5512.99.0030, 5513.11.0090, 5513.19.0040, 5513.21.0090, 5513.29.0040, 5513.41.0090, 5513.49.0040, 5515.11.0030, 5515.19.0030, 5515.29.0030, 5515.99.0030, 5516.41.0040, 5516.42.0040, 5516.44.0040, 5516.91.0040, 5516.92.0040, 5516.94.0040
2221D 24, 26	Poplin and broadcloth, poly/cotton (5.0 ounces or less per square yard)		5513.11.0020, 5513.21.0020, 5513.41.0020
2221D 28, 32	Poplin and broadcloth, poly/cotton (over 5.0 ounces per square yard)		5514.11.0020, 5514.21.0020, 5514.41.0020
2211D 34	Poplin and broadcloth, all other spun yarn		5512.11.0010, 5512.19.0015, 5512.21.0010, 5512.29.0015, 5512.91.0010, 5512.99.0015, 5513.19.0010, 5513.29.0010, 5513.49.0010, 5514.19.0010, 5514.29.0010, 5514.49.0010, 5515.11.0015, 5515.19.0015, 5515.29.0015, 5515.99.0015, 5516.41.0010, 5516.42.0010, 5516.44.0010, 5516.91.0010, 5516.92.0010, 5516.94.0010

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
2221D 14	Poly/cotton print cloth		5513.11.0060, 5513.21.0060, 5513.41.0060
2221D 16, 18	Other spun yarn, chiefly manmade fiber print cloth		5512.11.0030, 5512.19.0030, 5512.21.0030, 5512.29.0025, 5512.91.0030, 5512.99.0025, 5513.19.0030, 5513.29.0030, 5513.49.0030, 5515.11.0025, 5515.19.0025, 5515.29.0025, 5515.99.0025, 5516.41.0030, 5516.42.0030, 5516.44.0030, 5516.91.0030, 5516.92.0030, 5516.94.0030
2221D 88, 92	Manmade fiber duck		5512.11.0050, 5512.19.0040, 5512.21.0050, 5512.29.0035, 5512.91.0050, 5512.99.0035, 5514.11.0090, 5514.13.0040, 5514.19.0030, 5514.21.0090, 5514.23.0040, 5514.29.0030, 5514.41.0090, 5514.43.0040, 5514.49.0030, 5515.11.0035, 5515.19.0035, 5515.29.0035, 5515.99.0035, 5516.41.0050, 5516.42.0050, 5516.44.0050, 5516.91.0050, 5516.92.0050, 5516.94.0050
2221D 51, 53, 74, 76	Poly/cotton sheeting		5513.11.0040, 5513.21.0040, 5513.41.0040, 5514.11.0030, 5514.11.0050, 5514.21.0030, 5514.21.0050, 5514.41.0030, 5514.41.0050
2221D 55, 64, 66, 82, 84, 86	Other manmade fiber spun yarn sheeting		5512.11.0022, 5512.11.0027, 5512.19.0022, 5512.19.0027, 5512.21.0020, 5512.29.0020, 5512.91.0020, 5512.99.0020, 5513.19.0020, 5513.29.0020, 5513.49.0020, 5514.19.0020, 5514.29.0020, 5514.49.0020, 5515.11.0020, 5515.19.0020, 5515.29.0020, 5515.99.0020, 5516.41.0022, 5516.41.0027, 5516.42.0022, 5516.42.0027, 5516.44.0022, 5516.44.0027, 5516.91.0020, 5516.92.0020, 5516.94.0020
2221E 03, 2221G 46	Manmade fiber blue denim		5512.19.0010, 5512.29.0010, 5512.99.0010, 5514.32.0010, 5514.39.0010, 5515.11.0010, 5515.19.0010, 5515.29.0010, 5515.99.0010, 5516.43.0010, 5516.93.0010
2221E 14, 22, 24, 26, 28, 2221F 05, 07	Manmade fiber twills and sateens		5512.11.0060, 5512.19.0045, 5512.21.0060, 5512.29.0040, 5512.91.0060, 5512.99.0040, 5513.12.0000, 5513.13.0020, 5513.19.0050, 5513.22.0000, 5513.23.0020, 5513.29.0050, 5513.32.0000, 5513.43.0020, 5513.42.0000, 5513.49.0050, 5514.12.0020, 5514.12.0040, 5514.13.0020, 5514.19.0040, 5514.22.0020, 5514.22.0040, 5514.23.0020, 5514.29.0040, 5514.42.0020, 5514.42.0040, 5514.43.0020, 5514.49.0040, 5515.11.0040, 5515.19.0040, 5515.29.0040, 5515.99.0040, 5516.11.0020, 5516.12.0020, 5516.14.0020, 5516.41.0060, 5516.42.0060, 5516.44.0060, 5516.91.0060, 5516.92.0060, 5516.94.0060
2221F 12, 16	Manmade fiber oxfords		5512.11.0070, 5512.19.0050, 5512.21.0070, 5512.29.0045, 5512.91.0070, 5512.99.0045, 5513.13.0040, 5513.19.0060, 5513.23.0040, 5513.29.0060, 5513.43.0040, 5513.49.0060, 5515.11.0045, 5515.19.0045, 5515.29.0045, 5515.99.0045, 5516.41.0070, 5516.42.0070, 5516.44.0070, 5516.91.0070, 5516.92.0070, 5516.94.0070

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
2221X XX	Manmade fiber yarn dyed fabrics		5512.19.0005, 5512.29.0005, 5512.99.0005, 5513.31.0000-5513.39.0090, 5514.31.0000, 5514.32.0090, 5514.33.0010, 5514.33.0090, 5514.39.0020, 5514.39.0090, 5515.11.0005, 5515.19.0005, 5515.29.0005, 5515.99.0005, 5516.13.0000, 5516.43.0020-5516.43.0090, 5516.93.0020, 5516.93.0090
2221F 33, 36, 42, 44, 52, 54, 56, 58	All other manmade fiber spun yarn fabrics		5512.11.0090, 5512.19.0090, 5512.21.0090, 5512.29.0090, 5512.91.0090, 5512.99.0090, 5513.13.0090, 5513.19.0090, 5513.23.0090, 5513.29.0090, 5513.43.0090, 5513.49.0090, 5514.13.0090, 5514.19.0090, 5514.23.0090, 5514.29.0090, 5514.43.0090, 5514.49.0090, 5515.11.0090, 5515.19.0090, 5515.29.0090, 5515.99.0090, 5516.41.0090, 5516.42.0090, 5516.44.0090, 5516.91.0090, 5516.92.0090, 5516.94.0090
2221H 21-22, 92, 98	Manmade/wool blend fabrics, chiefly manmade		5407.91.1000, 5407.92.1000, 5407.93.1000, 5407.94.1000, 5408.31.1000, 5408.32.1000, 5408.33.1000, 5408.34.1000, 5515.13.1000, 5515.22.1000, 5515.92.1000, 5516.31.1000-5516.34.1000
2221G 04, 07, 19, 21, 33, 39, 45, 48, 63, 68, 77, 82, 84, 87	Spun/filament combination fabrics	5407.81.0000-5407.94.0000, 5408.31.0000-5408.34.0000, 5515.12.0000, 5515.21.0000, 5515.91.0000, 5516.21.0000-5516.24.0000	5407.81.0010-5407.84.0090, 5407.91.2020-5407.91.2090, 5407.92.2020-5407.92.2090, 5407.93.2020-5407.93.2090, 5407.94.2020-5407.94.2090, 5408.31.2020-5408.31.2090, 5408.32.9020-5408.32.9090, 5408.33.9020-5408.33.9090, 5408.34.9020-5408.34.9090, 5515.12.0010-5515.12.0090, 5515.21.0010-5515.21.0090, 5515.91.0010-5515.91.0090, 5516.21.0010-5516.24.0090
2221H 01, 11	Manmade fiber pile fabrics	5801.31.0000-5801.36.0000, 5802.20.0000, 5802.30.0000	5801.31.0000-5801.36.0020, 5802.20.0020, 5802.30.0030
2221H 31	Silk fabrics	5007.10.0000- 5007.90.0000	5007.10.3020-5007.90.6090
22312 01-02, 21, 23, 62, 85	Wool fabrics	5111.11.0000-5112.90.0000, 5801.14.0000	5111.11.6000-5112.90.6090, 5212.11.1010, 5212.11.1020, 5212.12.1010, 5212.12.1020, 5212.13.1010, 5212.13.1020, 5212.14.1010, 5212.14.1020, 5212.15.1010, 5212.15.1020, 5212.21.1010, 5212.21.1020, 5212.22.1010, 5212.22.1020, 5212.23.1010, 5212.23.1020, 5212.24.1010, 5212.24.1020, 5212.25.1010, 5212.25.1020, 5407.91.0510, 5407.91.0520, 5407.92.0510, 5407.92.0520, 5407.93.0510, 5407.93.0520, 5407.94.0510, 5407.94.0520, 5408.31.0510, 5408.31.0520, 5408.32.0510, 5408.32.0520, 5408.33.0510, 5408.33.0520, 5408.34.0510, 5408.34.0520, 5515.13.0510, 5515.13.0520, 5515.22.0510, 5515.22.0520, 5515.92.0510, 5515.92.0520, 5516.31.0510, 5516.31.0520, 5516.32.0510, 5516.32.0520, 5516.33.0510, 5516.33.0520, 5516.34.0510, 5516.34.0520, 5801.10.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
(NA)	Men's and boys' suits	6103.11.0000-6103.19.4000, 6203.11.0000-6203.19.0000	6103.11.0000-6103.19.4080, 6203.11.1000-6203.19.4080
(NA)	Men's and boys' dress and sport coats	6103.31.0000-6103.39.2000, 6203.31.0000-6203.39.4000	6103.21.0020, 6103.22.0020, 6103.23.0007, 6103.23.0037, 6103.29.1015, 6103.29.2034, 6103.29.2036, 6103.31.0000-6103.39.2060, 6203.31.0000-6203.39.4060
(NA)	Men's and boys' all other coats and jackets and down coats	6101.10.0000-6101.90.0000, 6201.11.0000-6201.99.0000	6101.10.0000-6101.90.0060, 6201.11.0000-6201.99.0060, 6103.21.0010, 6103.22.0010, 6103.23.0005, 6103.23.0036, 6103.29.1010, 6103.29.2028, 6103.29.2030
(NA)	Men's and boys' trousers, slacks, jeans, pants, etc.	6103.41.0000, 6103.42.0000, 6103.43.0000, 6103.49.1500, 6103.49.3000, 6203.41.0000, 6203.42.4007, 6203.42.4013, 6203.42.4017, 6203.42.4077, 6203.42.5010, 6203.43.5050, 6203.49.2500, 6203.49.3000, 6203.42.4077, 6203.43.5050	6103.21.0030, 6103.22.0030, 6103.23.0010, 6103.23.0040, 6103.29.1020, 6103.29.2040, 6103.29.2042, 6103.41.1010, 6103.42.1020, 6103.42.1035, 6103.42.1040, 6103.43.1010, 6103.43.1520, 6103.43.1535, 6103.43.1540, 6103.49.1010, 6103.49.1020, 6103.49.3010, 6103.49.3012, 6103.49.3014, 6103.49.3016, 6103.49.3018, 6103.49.3020, 6203.21.0020, 6203.22.3020, 6203.23.0020, 6203.23.0060, 6203.29.2030, 6203.29.3030, 6203.29.3040, 6203.41.1010, 6203.42.1020, 6203.42.4005, 6203.42.4010, 6203.42.4015, 6203.42.4020, 6203.42.4025, 6203.42.4030, 6203.42.4035, 6203.42.4040, 6203.42.4045, 6203.43.3010, 6203.43.3020, 6203.43.4010, 6203.43.4015, 6203.43.4020, 6203.49.2010, 6203.49.2020, 6203.49.2030, 6203.49.3020, 6203.49.3025, 6203.49.3030, 6203.49.3035, 6203.49.3040, 6203.49.3045
(NA)	Men's and boys' shorts	6103.41.0000, 6103.42.0000, 6103.43.0000, 6103.49.1500, 6103.49.3000, 6203.41.0000, 6203.42.4007, 6203.42.4013, 6203.42.4017, 6203.42.4077, 6203.42.5010, 6203.43.5050, 6203.49.2500, 6203.49.3000, 6203.42.4077, 6203.43.5050	6103.22.0040, 6103.23.0045, 6103.29.1030, 6103.41.1020, 6103.42.1050, 6103.42.1065, 6103.42.1070, 6103.43.1020, 6103.43.1550, 6103.43.1565, 6103.43.1570, 6103.49.1060, 6203.22.3030, 6203.23.0070, 6203.29.2035, 6203.41.1030, 6203.42.4050, 6203.42.4055, 6203.42.4060, 6203.43.3030, 6203.43.4030, 6203.43.4035, 6203.43.4040, 6203.49.2040, 6203.49.2050, 6203.49.2060, 6203.49.3050, 6203.49.3060
(NA)	Men's and boys' knit T-shirts and tank tops, excluding underwear	6109.10.0018, 6109.10.0029, 6109.10.0035, 6109.90.1008, 6109.90.1018, 6109.90.1040, 6109.90.2012	6109.10.0010, 6109.10.0015, 6109.10.0020, 6109.10.0025, 6109.10.0030, 6109.10.0035, 6109.90.1005, 6109.90.1010, 6109.90.1015, 6109.90.1020, 6109.90.1040, 6109.90.1520, 6109.90.2010, 6109.90.2015
(NA)	Men's and boys' all other knit shirts	6105.10.0000, 6105.20.0000, 6105.90.0000, 6110.20.2040, 6110.30.3040	6103.21.0050, 6103.22.0050, 6103.23.0025, 6103.23.0075, 6103.29.1050, 6103.29.2052, 6103.29.2054, 6105.10.0010, 6105.10.0020, 6105.10.0030, 6105.20.1000, 6105.20.2010, 6105.20.2020, 6105.20.2030, 6105.90.1000, 6105.90.3010, 6105.90.3020, 6105.90.3030, 6105.90.3040, 6105.90.3050, 6105.90.3060, 6110.10.1050, 6110.10.2070, 6110.20.1025, 6110.20.2040, 6110.20.2065, 6110.30.1050, 6110.30.1550, 6110.30.2050, 6110.30.3040, 6110.30.3050, 6110.90.0068, 6110.90.0072, 6110.90.0076, 6110.90.0080, 6110.90.0084, 6110.90.0088

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
(NA)	Men's and boys' woven shirts	6205.10.0000- 6205.90.0000	6203.21.0030, 6203.22.3050, 6203.23.0030, 6203.23.0080, 6203.29.2050, 6203.29.3050, 6203.20.3060, 6205.10.2010-6205.20.2075, 6205.30.1510-6205.90.4040
(NA)	Men's and boys' sweaters	6110.10.0015, 6110.10.0055, 6110.20.1010, 6110.20.1023, 6110.20.2012, 6110.20.2060, 6110.30.1570, 6110.30.2070, 6110.30.3012, 6110.30.3060, 6110.90.0011, 6110.90.0092	6103.21.0060, 6103.22.0070, 6103.23.0030, 6103.23.0070, 6103.29.1040, 6103.29.2058, 6103.29.2060, 6103.29.2062, 6103.29.2064, 6103.29.2066, 6103.29.2068, 6103.29.2070, 6103.29.2074, 6110.10.1010, 6110.10.2010, 6110.10.2020, 6110.20.1010, 6110.20.2010, 6110.20.2015, 6110.30.1010, 6110.30.1510, 6110.30.2010, 6110.30.3010, 6110.30.3015, 6110.90.0010, 6110.90.0012, 6110.90.0014, 6110.90.0016, 6110.90.0018, 6110.90.0020, 6110.90.0022, 6110.90.0024
(NA)	Men's and boys' swimwear	6112.31.0000, 6112.39.0000, 6211.11.0000	6112.31.0010, 6112.31.0020, 6112.39.0010, 6112.39.0020, 6211.11.1010, 6211.11.1020, 6211.11.2010, 6211.11.2020, 6211.11.2030, 6211.11.2040
(NA)	Men's and boys' warm-up and jogging suits	6112.11.0015, 6112.11.0050, 6112.12.0015, 6112.12.0050	6112.11.0010, 6112.11.0030, 6112.11.0050, 6112.12.0010, 6112.12.0030, 6112.12.0050, 6112.19.1010, 6112.19.1030, 6112.19.1050, 6112.19.2020, 6112.19.2050, 6112.19.2080, 6211.31.0010, 6211.31.0020, 6211.32.0040, 6211.32.0050, 6211.33.0030, 6211.33.0035, 6211.39.0040, 6211.39.0050
(NA)	Dresses	6104.41.0000-6104.49.0000, 6204.41.0000-6204.49.0000	6104.41.0010-6104.49.0060, 6114.10.0050, 6114.20.0015, 6114.30.3010, 6114.90.0015, 6114.90.0020, 6204.41.1000-6204.49.0060, 6211.41.0040, 6211.42.0060, 6211.43.0070, 6211.49.0070
(NA)	Women's and girls' woven blouses and shirts	6206.10.0000-6206.90.0000	6204.21.0060, 6204.22.3060, 6204.22.3065, 6204.23.0020, 6204.23.0050, 6204.23.0055, 6204.29.2030, 6204.29.2040, 6204.29.4046, 6204.29.4048, 6204.29.4050, 6204.29.4052, 6204.29.4054, 6204.29.4056, 6206.10.0010-6206.10.0050, 6206.20.2010-6206.20.3020, 6206.30.2000-6206.30.3060, 6206.40.2510-6206.90.4000
(NA)	Women's and girls' knit T-shirts and tank tops	6109.10.0042, 6109.10.0062, 6109.10.0070, 6109.90.1055, 6109.90.1068, 6109.90.1080	6109.10.0040-6109.10.0070, 6109.90.1050-6109.10.1080, 6109.90.1540, 6109.90.2020, 6109.90.2030
(NA)	Women's and girls' all other knit blouses and shirts	6106.10.0000-6106.90.0000	6104.21.0060, 6104.22.0060, 6104.23.0020, 6104.23.0036, 6104.29.1050, 6104.29.2046, 6104.29.2048, 6104.29.2050, 6104.29.2052, 6104.29.2053, 6104.29.2054, 6106.10.0010, 6106.10.0020, 6106.10.0030, 6106.20.1010, 6106.20.1020, 6106.20.2010, 6106.20.2020, 6106.20.2030, 6106.90.1010, 6106.90.1020, 6106.90.2010, 6106.90.2020, 6106.90.2030, 6106.90.2040, 6106.90.2050, 6106.90.3010, 6106.90.3020, 6106.90.3030, 6106.90.3040, 6110.10.1060, 6110.10.2080, 6110.20.1030, 6110.20.2075, 6110.30.1060, 6110.30.1560, 6110.30.2060, 6110.30.3055, 6110.90.0070, 6110.90.0074, 6110.90.0078, 6110.90.0082, 6110.90.0086, 6110.90.0090

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
(NA)	Women's and girls' suits	6104.11.0000-6104.19.2000, 6204.11.0000-6204.19.3000	6104.21.0010, 6104.22.0010, 6104.23.0010, 6104.23.0026, 6104.29.0010, 6104.29.2010-6104.29.2020, 6104.11.0000-6104.19.9000, 6204.11.0000-6204.19.3090
(NA)	Women's and girls' suit type jackets and coats	6104.31.0000-6104.39.2000, 6204.31.0000-6204.39.4000	6104.31.0000-6104.39.2090, 6204.31.1010-6204.39.4060
(NA)	Women's and girls' all other coats and jackets	6102.10.0000-6102.90.0000, 6202.11.0000-6202.99.0000	6102.10.0000-6102.90.0030, 6202.11.0010-6202.99.0060
(NA)	Skirts	6104.51.0000-6104.59.2000, 6204.51.0000-6204.59.4000	6104.21.0030, 6104.22.0030, 6104.23.0014, 6104.23.0030, 6104.29.1020, 6104.29.2022-6104.29.2032, 6104.51.0000-6104.59.2090, 6204.21.0030, 6204.22.3030, 6204.23.0010, 6204.23.0035, 6204.29.2015, 6204.29.4022-6204.29.4032, 6204.51.0010-6204.59.4060
(NA)	Womens' and girls' slacks, jeans, and pants	6104.61.0000, 6104.62.0000, 6104.63.0000, 6104.69.1500, 6104.69.3000, 6204.61.0000, 6204.62.4007, 6204.62.4013, 6204.62.4017, 6204.62.4057, 6204.63.2500, 6204.63.3200, 6204.53.3550, 6204.69.1500, 6204.69.7000	6104.21.0040, 6104.22.0040, 6104.23.0016, 6104.23.0032, 6104.29.1030, 6104.29.2034, 6104.29.2036, 6104.29.2038, 6104.29.2040, 6104.29.2042, 6104.29.2044, 6104.61.0010, 6104.62.2010, 6104.62.2015, 6104.62.2025, 6104.63.1510, 6104.63.2010, 6104.63.2015, 6104.63.2025, 6104.69.2010, 6104.69.3022, 6104.69.3024, 6104.69.3026, 6104.69.3028, 6104.69.3030, 6104.69.3032, 6113.00.0040, 6113.00.0050, 6204.21.0040, 6204.22.3040, 6204.23.0015, 6204.23.0040, 6204.29.2020, 6204.29.4034, 6204.29.4036, 6204.29.4038, 6204.29.4040, 6204.29.4042, 6204.29.4044, 6204.61.0010, 6204.61.0020, 6204.62.4005, 6204.62.4010, 6204.62.4020, 6204.62.4025, 6204.62.4030, 6204.62.4035, 6204.62.4040, 6204.62.4045, 6204.62.4050, 6204.63.2510, 6204.63.2520, 6204.63.3000, 6204.63.3510, 6204.63.3525, 6204.63.3530, 6204.69.2010, 6204.69.2020, 6204.69.2510, 6204.69.2520, 6204.69.2530, 6204.69.3010, 6204.69.3020, 6204.69.3030, 6204.69.3040, 6204.69.3050, 6204.69.9010, 6204.69.9020, 6204.69.9030, 6210.69.9040, 6210.50.1030, 6210.50.2030
(NA)	Women's and girls' shorts	6104.61.0000, 6104.62.0000, 6104.63.0000, 6104.69.1500, 6104.69.3000, 6204.61.0000, 6204.62.4007, 6204.62.4013, 6204.62.4017, 6204.62.4057, 6204.63.2500, 6204.63.3200, 6204.53.3550, 6204.69.1500, 6204.69.7000	6104.22.0050, 6104.23.0034, 6104.29.1040, 6104.61.0020, 6104.62.2030, 6104.61.2050, 6104.62.2060, 6104.63.1520, 6104.63.2030, 6104.63.2050, 6104.63.2060, 6104.69.2020, 6204.22.3050, 6204.23.0045, 6204.29.2025, 6204.61.0030, 6204.62.4055, 6204.62.4060, 6204.62.4065, 6204.63.3532, 6204.63.3535, 6204.63.3540, 6204.69.2030, 6204.69.2540, 6204.69.2550, 6204.69.2560
(NA)	Women's and girls' sweaters	6110.10.0035, 6110.10.0075, 6110.20.1020, 6110.20.1027, 6110.20.2022, 6110.20.2070, 6110.30.1580, 6110.30.2080, 6110.30.3022, 6110.30.3070, 6110.90.0027, 6110.90.0096	6104.21.0070, 6104.22.0080, 6104.23.0022, 6104.23.0040, 6104.29.1080, 6104.29.2056, 6104.29.2058, 6104.29.2060, 6104.29.2062, 6104.29.2064, 6104.29.2068, 6104.29.2070, 6104.29.2072, 6110.10.1020, 6110.10.2030, 6110.10.2040, 6110.20.1020, 6110.20.2020, 6110.20.2025, 6110.20.2045, 6110.30.1020, 6110.30.1520, 6110.20.2020, 6110.30.3005, 6110.30.3020, 6110.30.3025, 6110.30.3045, 6110.90.0026, 6110.90.0028, 6110.90.0030, 6110.90.0032, 6110.90.0036, 6110.90.0038, 6110.90.0040, 6110.90.0042

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
(NA)	Women's and girls' jogging and warm-up suits	6112.11.0035, 6112.11.0060, 6112.12.0035, 6112.12.0060, 6112.19.1000, 6112.19.2000	6112.11.0020, 6112.11.0040, 6112.11.0060, 6112.12.0020, 6112.12.0040, 6112.12.0060, 6112.19.1020, 6112.19.1040, 6112.19.1060, 6112.19.2010, 6112.19.2030, 6112.19.2040, 6112.19.2060, 6112.19.2070, 6112.19.2090, 6211.41.0010, 6211.41.0020, 6211.42.0030, 6211.42.0040, 6211.43.0040, 6211.43.0050, 6211.49.0040, 6211.49.0050
(NA)	Women's and girls' swimwear	6112.41.0000, 6112.49.0000, 6211.12.0000	6112.41.0010, 6112.41.0020, 6112.41.0030, 6112.41.0040, 6112.49.0010, 6112.49.0020, 6211.12.1010, 6211.12.1020, 6211.12.3010, 6211.12.3020
(NA)	Coveralls, overalls, and jumpsuits	6203.42.2015, 6203.43.1800, 6203.49.1000, 6204.62.2015, 6204.63.1400	6103.23.0055, 6103.41.2000, 6103.42.2010, 6103.42.2020, 6103.42.2030, 6103.43.2010, 6103.43.2015, 6103.43.2020, 6103.43.2025, 6103.49.2000, 6103.49.3034, 6103.49.3036, 6103.49.3038, 6103.49.3039, 6103.49.3040, 6103.49.3060, 6104.61.0030, 6104.62.1010, 6104.62.1020, 6104.62.1030, 6104.63.1010, 6104.63.1020, 6104.63.1030, 6104.69.1000, 6104.69.3010, 6104.69.3012, 6104.69.3014, 6104.69.3016, 6104.69.3018, 6104.69.3020, 6113.00.0055, 6113.00.0060, 6113.00.0065, 6113.00.0070, 6114.20.0042, 6114.20.0044, 6114.20.0046, 6114.20.0048, 6114.20.0052, 6114.30.3040, 6114.30.3050, 6114.90.0035, 6114.90.0040, 6203.41.2000, 6203.42.2005, 6203.42.2010, 6203.42.2025, 6203.42.2050, 6203.42.2090, 6203.43.1500, 6203.43.2005, 6203.43.2010, 6203.43.2025, 6203.43.2050, 6203.43.2090, 6203.49.1005, 6203.49.1010, 6203.49.1025, 6203.49.1050, 6203.49.1090, 6203.49.3010, 6203.49.3015, 6204.61.0040, 6204.62.2005, 6204.62.2010, 6204.62.2025, 6204.62.2050, 6204.63.1200, 6204.63.1505, 6204.63.1510, 6204.63.1525, 6204.63.1550, 6204.69.1005, 6204.69.1010, 6204.69.1025, 6204.69.1050, 6204.69.3060, 6204.69.3070, 6204.69.9050, 6210.40.1040, 6210.40.2040, 6210.50.1040, 6210.50.2040, 6211.32.0005, 6211.32.0010, 6211.32.0015, 6211.32.0025, 6211.33.0005, 6211.33.0010, 6211.33.0015, 6211.33.0017, 6211.39.0020, 6211.42.0005, 6211.42.0010, 6211.42.0020, 6211.43.0005, 6211.43.0010, 6211.43.0020, 6211.49.0020
(NA)	Playsuits	(NA)	6114.20.0035, 6114.20.0040, 6114.30.3020, 6114.30.3030, 6114.90.0025, 6114.90.0030, 6211.32.0030, 6211.33.0025, 6211.39.0030, 6211.42.0025, 6211.43.0030, 6211.49.0030
(NA)	Robes and dressing gowns	6107.91.0000-6107.99.0000, 6108.91.0000-6108.99.0000, 6207.91.1000, 6207.92.2000, 6207.99.3000, 6208.91.1000, 6208.92.0015, 6208.99.2010	6107.91.0010-6107.99.4020, 6108.91.0010-6108.99.4020, 6207.91.1000, 6207.92.2010, 6207.92.2020, 6207.99.2000, 6207.99.6010, 6207.99.6020, 6208.91.1010, 6208.91.1020, 6208.92.0010, 6208.92.0020, 6208.99.2010, 6208.99.6010, 6208.99.6020, 6208.99.8010
(NA)	Pajamas, nightgowns, and other nightwear	6107.21.0000-6107.29.0000, 6108.31.0000-6108.39.0000, 6207.21.0000-6207.29.0000, 6208.21.0000-6208.29.0000	6107.21.0010-6107.29.4020, 6108.31.0010-6108.39.2020, 6207.21.0010-6207.29.0030, 6208.21.0010-6208.29.0030

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
(NA)	Underwear (except foundation garments)	6107.11.0000-6107.19.0000, 6108.11.0000-6108.29.0000, 6109.10.0005, 6109.10.0037, 6109.90.1510, 6109.90.1530, 6207.11.0000, 6207.19.0000, 6207.91.3000, 6207.92.4000, 6207.99.5000, 6208.11.0000, 6208.19.0000, 6208.91.3000, 6208.92.0035, 6208.99.2020	6107.11.0010-6107.19.0020, 6108.11.0010-6108.29.0020, 6109.10.0005, 6109.10.0037, 6109.90.1510, 6109.90.1530, 6207.11.0000-6207.19.0030, 6208.11.0000, 6208.19.2000, 6208.19.4010, 6208.19.4020, 6208.91.3010, 6208.91.3020, 6208.92.0025, 6208.92.0030, 6208.92.0040, 6208.99.2020, 6208.99.6030, 6208.99.6040, 6208.99.8020
(NA)	Foundation garments	6212.10.0010-6212.30.0000	6212.10.1010-6212.30.0030
(NA)	Infants' apparel	6111.10.0000-6111.90.6000, 6209.10.0000-6209.90.0000	6111.10.0010-6111.90.6020, 6209.10.0000-6209.90.4020
23813	Knitted, not coated or impregnated, gloves and mittens	6116.91.0000, 6116.92.0000, 6116.93.0000, 6116.99.0000	6116.92.6410, 6116.92.6420, 6116.92.6430, 6116.92.6440, 6116.92.7450, 6116.92.7460, 6116.92.7470, 6116.92.8800, 6116.92.9400, 6116.93.6400, 6116.93.7400, 6116.93.8800, 6116.93.9400, 6116.93.4800, 6116.99.5400
3069D	Knitted, plastic, or rubber, coated or impregnated, gloves and mittens	6116.10.0000	6116.10.1300, 6116.10.1720, 6116.10.1730, 6116.10.1740, 6116.10.9010, 6116.10.9025, 6116.10.9030, 6116.10.9040
23818	Woven, not impregnated, gloves and mittens	6216.00.3500, 6216.00.4000, 6216.00.5000, 6216.00.6000	6216.00.3800, 6216.00.4100, 6216.00.5410, 6216.00.5420
3069D	Woven, impregnated, gloves and mittens	6216.00.0500	6216.00.1300, 6216.00.1720, 6216.00.1730, 6216.00.1740, 6216.00.1810, 6216.00.1820, 6216.00.1830, 6216.00.1840, 6216.00.2810, 6216.00.2825, 6216.00.2830, 6216.00.2840, 6216.00.3210, 6216.00.3225, 6216.00.3230, 6216.00.3240
23814, 31510	All leather and leather and fabric combination gloves and mittens	4203.29.0000	4203.29.0500, 4203.29.0800, 4203.29.1500, 4203.29.1800, 4203.29.2000, 4203.29.3010, 4203.29.3020, 4203.29.4000, 4203.29.5000
30698	Rubber, medical, and surgical gloves	4015.11.0000	4015.11.0000
3069D	Other rubber gloves	4015.19.0000	4015.19.1010
30896	Plastic surgical and medical gloves	3926.20.1010, 3926.20.1060, 3926.20.4000	3926.20.1010, 3926.20.1020, 3926.20.1050, 3926.20.3000, 3926.20.4010, 3926.20.4050
2221K 00, 23922 00, 2211H 00 pt.	Sheets and pillowcases	6302.10.0000, 6302.21.0015, 6302.21.0025, 6302.22.0010, 6302.22.0020, 6302.29.0000, 6302.31.0015, 6302.31.0025, 6302.32.0010, 6302.32.0020	6302.10.0010, 6302.10.0020, 6302.21.0010-6302.21.1055, 6302.21.2010-6302.21.2055, 6302.22.1010-6302.22.1040, 6302.22.2010, 6302.22.2020, 6302.29.0010, 6302.29.0020, 6302.31.1010-6302.31.1055, 6302.31.2010-6302.31.2055, 6302.32.1010-6302.32.2050
2211G 00, 23923 00, 2221M 00 pt.	Terry towels and washcloths	6302.60.0010, 6302.60.0020, 6302.60.0030	6302.60.0010, 6302.60.0020, 6302.60.0030

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
(NA)	Footwear with rubber or plastic uppers and rubber or plastic soles, including rubber or plastic-coated fabric uppers: Waterproof, made with steel safety toes	6401.10.0000	6401.10.0000
(NA)	Waterproof boots (except with steel safety toes)	6401.91.0000, 6401.92.3000, 6401.92.7000	6401.91.0000, 6401.92.3000, 6401.92.6000, 6401.92.9000
(NA)	All other waterproof rubber or plastic footwear	6401.99.0000	6401.99.3000, 6401.99.6000, 6401.99.8000, 6401.99.9000
(NA)	Rubber or plastic athletic footwear made with cleats, spikes, springs, stops, etc.	6402.11.0000, 6402.19.0000	6402.19.5030, 6402.19.3060, 6402.19.7060, 6402.19.5060, 6402.11.0000, 6402.19.1020, 6402.19.1040, 6402.19.1060, 6402.19.1080, 6402.19.7030, 6402.19.9030, 6402.19.9060
(NA)	Other rubber or plastic athletic footwear	6402.99.1515	6402.99.1515
(NA)	Rubber or plastic footwear made with steel safety toes	6402.23.0000	6402.30.3000, 6402.60.5000, 6402.30.9000
(NA)	Rubber or plastic boots (except with steel safety toes)	6402.91.1500, 6402.91.2500, 6402.91.3500	6402.91.6030, 6402.91.6060, 6402.91.7030, 6402.91.7060, 6402.91.4015, 6402.91.4030, 6402.91.4045, 6402.91.4060, 6402.91.4075, 6402.91.5030, 6402.91.5060, 6402.91.5090, 6402.91.7090, 6402.91.8030, 6402.91.8060, 6402.91.8090, 6402.91.9030, 6402.91.9060, 6402.91.9090
(NA)	All other rubber or plastic footwear	6402.99.1200, 6402.99.5100, 6402.99.5400, 6402.99.5700	6402.99.7060, 6402.99.0560, 6402.99.0530, 6402.99.1030, 6402.99.0590, 6402.99.1060, 6402.99.1090, 6402.99.1510, 6402.99.1520, 6402.99.1525, 6402.99.1530, 6402.99.1540, 6402.99.1550, 6402.99.1560, 6402.99.1570, 6402.99.1580, 6402.99.1590, 6402.99.2030, 6402.99.2060, 6402.99.2090, 6402.99.3020, 6402.99.3040, 6402.99.3060, 6402.99.3080, 6402.99.6030, 6402.99.6060, 6402.99.6090, 6402.99.7030, 6402.99.7090, 6402.99.8030, 6402.99.8060, 6402.99.8090, 6402.99.9030, 6402.99.9060, 6402.99.9090
(NA)	Leather upper athletic footwear made with cleats, spikes, springs, stops, etc.	6403.11.0000, 6403.19.0000	6403.11.3000, 6403.11.6000, 6403.19.1500, 6403.19.4590, 6403.19.6030, 6403.19.6060, 6403.19.6090
(NA)	Other leather upper athletic footwear	6403.30.0000, 6403.99.1500, 6403.99.2500, 6403.99.3500, 6403.99.5500, 6403.99.6500, 6403.99.8500	6403.99.4045, 6403.99.4015, 6403.99.2030, 6403.99.2060, 6403.99.2090, 6403.99.4030, 6403.99.4060, 6403.99.4070, 6403.99.4075, 6403.99.4090, 6403.99.6015, 6403.99.6020, 6403.99.6030, 6403.99.6040, 6403.99.6050, 6403.99.6060, 6403.99.6070, 6403.99.6080, 6403.99.6090, 6403.99.7515, 6403.99.7530, 6403.99.7560, 6403.99.7590, 6403.99.9005, 6403.99.9010, 6403.99.9020, 6403.99.9030, 6403.99.9040, 6403.99.9050, 6403.99.9060, 6403.99.9070, 6403.99.9080, 6403.99.9090
(NA)	Leather upper and sole footwear, made with steel safety toes	6403.40.0000	6403.40.3030, 6403.40.3090, 6403.40.6000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
(NA)	Leather upper and leather sole boots (except with steel safety toes)	6403.51.1000, 6403.51.2000, 6403.51.4000	6403.51.3015, 6403.51.3030, 6403.51.3045, 6403.51.3060, 6403.51.3075, 6403.51.6015, 6403.51.6030, 6403.51.6060, 6403.51.9015, 6403.51.9030, 6403.51.9045, 6403.51.9060, 6403.51.9075
(NA)	Leather upper and leather sole shoes (except with steel safety toes)	6403.20.0000, 6403.59.2500, 6403.59.4500, 6403.59.6500	6403.59.3080, 6403.59.1530, 6403.20.0000, 6403.59.1520, 6403.59.1545, 6403.59.1550, 6403.59.1560, 6403.59.3020, 6403.59.3040, 6403.59.3045, 6403.59.3060, 6403.59.6040, 6403.59.6060, 6403.59.6080, 6403.59.9030, 6403.59.9045, 6403.59.9060, 6403.59.9075, 6403.59.9090
(NA)	Leather upper and other than leather sole, made with steel safety toes	(³)	(⁴)
(NA)	Leather upper and other than leather sole boots (except with steel safety toes)	6403.91.0000, 6403.91.1500, 6403.91.2000, 6403.91.4000, 6403.91.8000	6403.91.6050, 6403.91.3015, 6403.91.3030, 6403.91.3045, 6403.91.3060, 6403.91.3070, 6403.91.3075, 6403.91.3090, 6403.91.6020, 6403.91.6030
(NA)	Leather upper and other than leather sole shoes (except with steel safety toes)	(⁵)	(⁶)
(NA)	Athletic footwear with fabric upper	6404.11.0000	6404.11.2030, 6404.11.2045, 6404.11.2060, 6404.11.2075, 6404.11.2090, 6404.11.4000, 6404.11.5000, 6404.11.6030, 6404.11.6060, 6404.11.6090, 6404.11.7030, 6404.11.7060, 6404.11.7090, 6404.11.8030, 6404.11.8060, 6404.11.8090, 6404.11.9030, 6404.11.9060, 6404.11.9090
(NA)	All other fabric upper footwear with rubber or plastic sole	6404.19.4500, 6404.19.5500, 6404.19.6500	6404.19.2515, 6404.19.2530, 6404.19.2520, 6404.19.3015, 6404.19.9090, 6404.19.1520, 6404.19.1540, 6404.19.1560, 6404.19.1580, 6404.19.2030, 6404.19.2060, 6404.19.2090, 6404.19.2560, 6404.19.2590, 6404.19.3020, 6404.19.3040, 6404.19.3060, 6404.19.3080, 6404.19.3515, 6404.19.3540, 6404.19.3560, 6404.19.3580, 6404.19.4030, 6404.19.4060, 6404.19.4090, 6404.19.5015, 6404.19.5030, 6404.19.5060, 6404.19.5090, 6404.19.6030, 6404.19.6060, 6404.19.6090, 6404.19.7015, 6404.19.7030, 6404.19.7060, 6404.19.7090, 6404.19.8030, 6404.19.8060, 6404.19.8090, 6404.19.9030, 6404.19.9060
(NA)	All other fabric upper footwear	6404.20.2500, 6404.20.4500, 6404.20.6500, 6405.20.1500, 6405.20.2500, 6405.20.4500, 6405.20.6500	6404.20.2030, 6405.20.6060, 6404.20.2060, 6404.20.2090, 6404.20.4030, 6404.20.4060, 6404.20.4090, 6404.20.6040, 6404.20.6060, 6404.20.6080, 6405.20.3030, 6405.20.3060, 6405.20.6030, 6405.20.6090, 6405.20.9015, 6405.20.9030, 6405.20.9060, 6405.20.9090

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
	BUILDING MATERIALS		
24212 74	Lodgepole pine lumber	4407.10.0023, 4407.10.0024	4407.10.0023, 4407.10.0024
24212 71	Ponderosa pine (western yellow pine) lumber	4407.10.0027, 4407.10.0028	4407.10.0027, 4407.10.0028
24212 14, 16, 17, 72, 76	Other pine, including southern yellow and eastern white pine lumber	4407.10.0021, 4407.10.0022, 4407.10.0025, 4407.10.0026, 4407.10.0029, 4407.10.0030	4407.10.0021, 4407.10.0022, 4407.10.0025, 4407.10.0026, 4407.10.0029, 4407.10.0030
24212 18, 66, 78, 80	Spruce and fir (other than douglas fir) lumber	4407.10.0006, 4407.10.0007, 4407.10.0008, 4407.10.0009, 4407.10.0012, 4407.10.0013, 4407.10.0035, 4407.10.0036	4407.10.0006, 4407.10.0007, 4407.10.0008, 4407.10.0009, 4407.10.0012, 4407.10.0013, 4407.10.0035, 4407.10.0036
24212 63	Douglas fir lumber	4407.10.0031, 4407.10.0032, 4407.10.0033, 4407.10.0034	4407.10.0031, 4407.10.0032, 4407.10.0033, 4407.10.0034
24212 60	Western red cedar lumber	4407.10.0060, 4407.10.0061	4407.10.0060, 4407.10.0061
24212 20, 62, 79	Other softwood lumber, including hemlock and other cedars	4407.10.0040, 4407.10.0041, 4407.10.0050, 4407.10.0051, 4407.10.0062, 4407.10.0063, 4407.10.0072, 4407.10.0073, 4407.10.0080, 4407.10.0081, 4407.10.0090, 4407.10.0091	4407.10.0040, 4407.10.0041, 4407.10.0050, 4407.10.0051, 4407.10.0062, 4407.10.0063, 4407.10.0072, 4407.10.0073, 4407.10.0080, 4407.10.0081, 4407.10.0090, 4407.10.0091
24211 51	Ash lumber	4407.99.0065, 4407.99.0066	4407.99.0065, 4407.99.0066
24211 53	Beech lumber	4407.92.0020, 4407.92.0040	4407.92.0020, 4407.92.0040
24211 55	Birch lumber	4407.99.0050, 4407.99.0051	4407.99.0050, 4407.99.0051
24211 57	Cherry lumber	4407.99.0040, 4407.99.0041	4407.99.0040, 4407.99.0041
24211 65	Hickory and pecan lumber	4407.99.0070, 4407.99.0071	4407.99.0070, 4407.99.0071
24211 67, 69	Maple lumber	4407.99.0020, 4407.99.0021, 4407.99.0025	4407.99.0020, 4407.99.0021, 4407.99.0025
24211 71	Red oak lumber	4407.91.0020, 4407.91.0021	4407.91.0020, 4407.91.0021
24211 73	White oak lumber	4407.91.0060, 4407.91.0061	4407.91.0060, 4407.91.0061
24211 75	Walnut lumber	4407.99.0075, 4407.99.0076	4407.99.0075, 4407.99.0076
24211 77	Yellow poplar lumber	4407.99.0045, 4407.99.0046	4407.99.0045, 4407.99.0046
24211 59, 61, 63, 79, 99	Other hardwood lumber, including cottonwood, aspen, and gum	4407.99.0030, 4407.99.0031, 4407.99.0090, 4407.99.0095	4407.99.0030, 4407.99.0031, 4407.99.0047, 4407.99.0048, 4407.99.0091, 4407.99.0096
32550 11, 14, 35	Clay brick and shapes	6902.20.1010, 6902.20.5010, 6902.90.1010, 6902.90.5010, 6903.90.0010	6902.20.1010, 6902.20.5010, 6902.90.1010, 6902.90.5010, 6903.90.0010
32550 55, 61, 65, 70	Unshaped clay refractories and gunning mixes	3816.00.0010	3816.00.0010
32550 85, 95	Other clay refractory materials	2508.30.0000, 2508.40.0010, 2508.40.0050, 2508.50.0000, 2508.60.0000	2508.30.0000, 2508.40.0010, 2508.40.0050, 2508.50.0000, 2508.60.0000
32970 13, 15, 19	Nonclay magnesite and magnesite-chrome brick and shapes, and chrome brick	6902.10.1000, 6902.10.5000	6902.10.1000, 6902.10.5000
32970 12, 48, 50, 55, 58	All other nonclay brick and shapes	6902.20.1020, 6902.20.5020, 6902.90.1020, 6902.90.5020, 6903.90.0050	6902.20.1020, 6902.20.5020, 6902.90.1020, 6902.90.5020, 6903.90.0050

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
32970 61-75	Unshaped nonclay refractories and gunning mixes	3816.00.0050	3816.00.0050
32970 94, 96	Other nonclay refractory materials	2519.10.0000, 2519.90.1000, 2519.90.2000, 2519.90.5000	2519.10.0000, 2519.90.1000, 2519.90.2000, 2519.90.5000
32510 11, 31, 61	Brick and other structural brick and tile	6904.10.0015, 6904.10.0090, 6904.90.0000	6904.10.0020, 6904.10.0040, 6904.90.0000
32530 20	Ceramic mosaic tile	6908.10.0000, 6907.10.0000	6908.10.1000, 6908.10.2000, 6907.10.0000
32530 05, 15, 30	Clay floor and wall tile	6908.90.0000, 6907.90.0000	6908.90.0000, 6907.90.0000, 6908.10.5000
32591 00	Vitrified clay sewer pipe and fittings	6906.00.0000	6906.00.0000
32610 21, 24, 27, 31	Ceramic water closet bowls and flush tanks	6910.10.0005, 6910.10.0010, 6910.10.0025	6910.10.0005, 6910.10.0010, 6910.10.0015, 6910.10.0020
32610 17, 54	Sinks and lavatories	6910.10.0030	6910.10.0030
32610 12, 36, 39	Other ceramic sanitary fixtures	6910.10.0050	6910.10.0050
34310 47, 53	Sinks and wash basins, of stainless steel	7324.10.0000	7324.10.0000
34310 61, 86	Bathtubs, cast iron	7324.21.0000	7324.21.1000, 7324.21.5000
34310 62, 89	Bathtubs, steel	7324.29.0000	7324.29.0000
30880 11-15, 29, 33, 55-71	Baths, shower baths, and washbasins, of plastics	3922.10.0000	3922.10.0000
30880 04, 31, 41	Other sanitary fixtures, of plastics	3922.90.0000	3922.90.0000
CHEMICALS AND RELATED PRODUCTS			
28121 11	Chlorine gas	2801.10.0000	2801.10.0000
28123 50	Sodium hydroxide, total liquid (all processes)	2815.12.0000, 2815.11.0000	2815.12.0000, 2815.11.0000
28125 21	Potassium hydroxide, liquid	2815.20.0000	2815.20.0000
28125 30	Finished sodium bicarbonate	2836.30.0000	2836.30.0000
28161 00	Titanium dioxide (composite and pure)	2823.00.0000, 3206.10.0000	2823.00.0000, 3206.10.0010
28193 —	Sulfuric acid, gross	2807.00.0000	2807.00.0000
28194 11	Boric acid	2810.00.0000	2810.00.0000
28194 41-47	Hydrochloric acid	2806.10.0000	2806.10.0000
28194 61, 65	Hydrofluoric acid	2811.11.0000	2811.11.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
28194 51, 67, 98	Other inorganic acids	2811.19.0000, 2806.20.0000	2811.19.1000, 2811.19.5010, 2811.19.5050, 2806.20.0000, 2808.00.0020
28195 00	Aluminum oxide	2818.20.0000	2818.20.0000
28196 13, 17	Aluminum chloride	2827.32.0000	2827.32.0000
28196 25	Aluminum hydroxide, trihydrate	2818.30.0000	2818.30.0000
28196 27	Aluminum fluoride	2826.12.0000	2826.12.0000
28196 51	Aluminum sulfate (commercial)	2833.22.0000	2833.22.0000
28196 73	Aluminates (sodium aluminate, etc.)	2841.10.0000	2841.10.0000
28197 13	Potassium iodide	2827.60.2000	2827.60.2000
28197 16	Potassium sulfate	3104.30.0000	3104.30.0000
28197 23	Potassium phosphates	2835.24.0000	2835.24.0000
28197 24	Potassium silicates	2839.20.0000	2839.20.0000
28197 21	Sodium metal	2805.11.0000	2805.11.0000
28197 27	Sodium chlorate	2829.11.0000	2829.11.0000
28197 84	Sodium sulfite	2832.10.0000	2832.10.0000
28197 32, 33	Sodium phosphate mono and dibasic	2835.22.0000	2835.22.0000
28197 34	Sodium phosphate tribasic	2835.23.0000	2835.23.0000
28197 38	Sodium phosphate tripoly	2835.31.0000	2835.31.0000
28197 41, 45, 47	Sodium silicates (other than metasilicates)	2839.19.0000	2839.19.0000
28197 42, 44	Sodium metasilicates	2839.11.0000	2839.11.0000
28197 61, 66	Sodium sulfate	2833.11.1000, 2833.11.5000, 2833.19.0000	2833.11.1000, 2833.11.5010, 2833.11.5050, 2833.19.0000
28197 85	Sodium thiosulfate (hypo)	2832.30.0000	2832.30.0000
28199 05	Barium sulfate	2833.27.0000	2833.27.0000
28199 04	Barium carbonate	2836.60.0000	2836.60.0000
28199 10	Bromine	2801.30.2000	2801.30.2000
28199 12	Calcium carbide	2849.10.0000	2849.10.0000
28199 13	Calcium carbonate (precipitated)	2836.50.0000	2836.50.0000
28199 14	Calcium chloride	2827.20.0000	2827.20.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
28199 18, 19, 22, 28742 71	Calcium phosphates	2835.25.0000, 2835.26.0000	2835.25.0000, 2835.26.0000
28199 25, 27	Carbon activated (granular and pulverized)	3802.10.0000	3802.10.0000
28199 35	Cuprous oxide	(NA)	2825.50.2000
28199 39	Hydrogen peroxide	2847.00.0000	2847.00.0000
28199 40	Iodine	2801.20.0000	2801.20.0000
28199 43	Iron oxides and hydroxides	2821.10.0050	2821.10.0050
28199 48	Magnesium chloride	2827.31.0000	2827.31.0000
28199 49	Magnesium sulfate	2833.21.0000	2833.21.0000
28199 51	Manganese dioxide	2820.10.0000	2820.10.0000
28199 53	Mercury	2805.40.0000	2805.40.0000
28199 5B	Molybdates	2841.70.0000	2841.70.1000, 2841.70.5000
28199 56	Nickel oxides and hydroxides	2825.40.0000	2825.40.0000
28199 57	Nickel chloride	2827.35.0000	2827.35.0000
28199 55	Nickel sulfate	2833.24.0000	2833.24.0000
28199 58	Phosphorous, elemental	2804.70.0000	2804.70.0000
28199 60, 63	Phosphorous, oxychloride and trichloride	2812.10.5010	2812.10.5010
28199 71	Strontium carbonate	2836.92.0000	2836.92.0000
28199 74	Sulfur, recovered elemental	2503.10.0000	2503.10.0010, 2503.10.0090
28199 75	Sulfur dioxide	2811.23.0000	2811.23.0000
28199 84	Tungstates	2841.80.0010, 2841.80.0040	2841.80.0010, 2841.80.0020, 2841.80.0050
28199 87	Zinc sulfate	2833.26.0000	2833.26.0000
28199 86	Zinc oxide and peroxide	2817.00.0000	2817.00.0000
28199 88	Zinc chloride	2827.36.0000	2827.36.0000
28163 13-19	Chrome colors	3206.20.0000	3206.20.0010, 3206.20.0020, 3206.20.0030, 3206.20.0050
28422 43, 53, 28199 15, 30	Bleaches (sodium and calcium hypochlorite, etc.)	2828.10.0000, 2828.90.0000	2828.10.0000, 2828.90.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
28731 11	Nitric acid	(NA)	2808.00.0010
28731 30, 32	Anhydrous ammonia, synthetic	2814.10.0000, 2814.20.0000	2814.10.0000, 2814.20.0000
28731 50	Ammonium nitrate, original solution	3102.30.0000	3102.30.0000
28731 56, 58	Ammonium sulfate	3102.21.0000	3102.21.0000
28731 66	Nitrogen solutions, ammonium nitrate/urea solutions	3102.80.0000	3102.80.0000
28732 00	Urea	3102.10.0000	3102.10.0000
28742 15	Normal and enriched superphosphates	3103.10.0010	3103.10.0010
28742 41	Concentrated superphosphates	3103.10.0020	3103.10.0020
28742 51	Monoammonium phosphates	(NA)	3105.40.0010
28742 52	Diammonium phosphates	3105.30.0000	3105.30.0000
28741 81, 85	Phosphoric acid	2809.20.0010, 2809.20.0020, 2809.20.0030	2809.20.0010, 2809.20.0020, 2809.20.0030
28193 —	Sulfuric acid, gross	2807.00.0000	2807.00.0000
28133 01, 02, 31	Carbon dioxide (gas, liquid, and solid)	2811.21.0000	2811.21.0000
28137 15	Argon	2804.21.0000	2804.21.0000
28137 22-62	Hydrogen	2804.10.0000	2804.10.0000
28135 00	Nitrogen	2804.30.0000	2804.30.0000
28136 00	Oxygen	2804.40.0000	2804.40.0000
28511 00, 28512 00, 28513 00	Paint, varnish, and lacquer	3208.10.0000, 3208.20.0000, 3208.90.0000, 3209.10.0000, 3209.90.0000, 3210.00.0000	3208.10.0000, 3208.20.0000, 3208.90.0000, 3209.10.0000, 3209.90.0000, 3210.00.0000
28515 23, 31	Paint and varnish remover, including thinners	3814.00.0000	3814.00.1000, 3814.00.2000, 3814.00.5000
28515 98	Other miscellaneous allied paint products	3214.10.0090, 3214.90.1000, 3214.90.5000	3214.10.0090, 3214.90.1000, 3214.90.5000
28341 —	Pharmaceutical preparations affecting neoplasms, endocrine system, and metabolic disease	3003.31.0000, 3003.39.0000, 3003.40.0000, 3004.31.0000, 3004.32.0000, 3004.39.0050, 3004.90.6015	3003.31.0000, 3003.39.1000, 3003.39.5000, 3003.40.0000, 3004.31.0000, 3004.32.0000, 3004.39.0050, 3004.90.6015
28342 —	Pharmaceutical preparations acting on central nervous system and sense organs	3004.40.0020, 3004.40.0030, 3004.90.6025, 3004.90.6030, 3004.90.6035, 3004.40.0040, 3004.90.6040	3004.40.0020, 3004.40.0030, 3004.90.6025, 3004.90.6030, 3004.90.6035, 3004.40.0040, 3004.90.6040
28343 —	Pharmaceutical preparations acting on cardiovascular system	3004.40.0010, 3004.90.6020	3004.40.0010, 3004.90.6020

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
28344 —	Pharmaceutical preparations acting on respiratory system	3004.40.0060, 3004.90.3000, 3004.90.6075, 3004.90.6080, 3004.90.6085	3004.40.0060, 3004.90.3000, 3004.90.6075, 3004.90.6080, 3004.90.6085
28345 —	Pharmaceutical preparations acting on digestive or genito-urinary system	3004.90.6050, 3004.90.6055, 3004.90.6060, 3004.90.6065, 3004.90.6070, 3006.60.0000	3004.90.6050, 3004.90.6055, 3004.90.6060, 3004.90.6065, 3004.90.6070, 3006.60.0000
28346 —	Pharmaceutical preparations acting on skin	3004.40.0050, 3004.90.6045	3004.40.0050, 3004.90.6045
28347 —	Vitamin, nutrient, and hematinic preparations	3004.50.4500, 3004.50.5010, 3004.50.5020, 3004.50.5030, 3004.50.5040	3004.50.1000, 3004.50.2000, 3004.50.3000, 3004.50.4000, 3004.50.5010, 3004.50.5020, 3004.50.5030, 3004.50.5040
28348 —	Pharmaceutical preparations affecting parasitic and infective disease	3003.10.0000, 3003.20.0000, 3004.10.1020, 3004.10.1045, 3004.10.5045, 3004.10.5060, 3004.20.0020, 3004.20.0030, 3004.20.0040, 3004.20.0050, 3004.90.1000, 3004.90.6005, 3004.90.6010	3003.10.0000, 3003.20.0000, 3004.10.1020, 3004.10.1045, 3004.10.5045, 3004.10.5060, 3004.20.0020, 3004.20.0030, 3004.20.0040, 3004.20.0050, 3004.90.1000, 3004.90.6005, 3004.90.6010
28349 —	Pharmaceutical preparations for veterinary use	3004.10.1010, 3004.10.5010, 3004.20.0010, 3004.39.0010, 3004.40.0005, 3004.50.5005, 3004.90.6003	3004.10.1010, 3004.10.5010, 3004.20.0010, 3004.39.0010, 3004.40.0005, 3004.50.5005, 3004.90.6003
GLASS PRODUCTS			
32115 12-16	Sheet, plate, and float glass ⁷	⁸ 7003.11.0000, 7003.19.0000, 7004.10.0000, 7004.90.0000, 7005.10.0000, 7005.21.0000, 7005.29.0000	⁸ 7003.11.0000, 7003.19.0000, 7004.10.1000, 7004.10.2010, 7004.10.2020, 7004.10.5000, 7004.90.0500, 7004.90.1000, 7004.90.1500, 7004.90.2000, 7004.90.2510, 7004.90.2520, 7004.90.2550, 7004.90.3010, 7004.90.3020, 7004.90.3050, 7004.90.4000, 7004.90.5000, 7005.10.0000, 7005.21.1010, 7005.21.1030, 7005.21.2000, 7005.29.0510, 7005.29.0550, 7005.29.1510, 7005.29.1550, 7005.29.2500
32295, 32298, 32311-12	Table, kitchen, art, and novelty glassware	7013.21.0000, 7013.29.0000, 7013.10.0000, 7013.31.0000, 7013.32.0000, 7013.39.0000, 7013.91.0000, 7013.99.0000, 9505.10.1000	7013.21.1000, 7013.21.2000, 7013.21.3000, 7013.21.5000, 7013.29.0500, 7013.29.1000, 7013.29.2000, 7013.29.3000, 7013.29.4000, 7013.29.5000, 7013.29.6000, 7013.10.1000, 7013.10.5000, 7013.31.1000, 7013.31.2000, 7013.31.3000, 7013.31.5000, 7013.32.1000, 7013.32.2000, 7013.32.3000, 7013.32.4000, 7013.39.1000, 7013.39.2000, 7013.39.3000, 7013.39.4000, 7013.39.5000, 7013.39.6000, 7013.91.1000, 7013.91.2000, 7013.91.3000, 7013.91.5000, 7013.99.1000, 7013.99.2000, 7013.99.3000, 7013.99.3500, 7013.99.4000, 7013.99.5000, 7013.99.6000, 7013.99.7000, 7013.99.8000, 7013.99.9000, 9505.10.1000
3229Y 43, 3231Y 43	Searchlight and other lenses	7014.00.3000, 7014.00.5000	7014.00.3000, 7014.00.5000
3229Y 45, 3231Y 45	Lighting glassware	7011.10.0000	7011.10.1000, 7011.10.5000
3229Y 51, 55, 3231Y 51, 55	Electronic tube blanks, including TV tube blanks and parts	7011.20.0000, 7011.90.0000	7011.20.0000, 7011.90.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
3229Y 57, 59, 3231Y 57, 59	Glass lamp chimneys, bowls, shades, globes, parts, and other glassware (interior and exterior)	(NA)	9405.91.3000, 9405.91.4000, 9405.91.6000
3229Z 71, 3231Z 71	Glass tubing, rods, and canes, all types (except electrical and electronic)	7002.20.0000, 7002.31.0000, 7002.32.0000, 7002.39.0000	7002.20.1000, 7002.20.5000, 7002.31.0000, 7002.32.0000, 7002.39.0000
3229Z 72, 74, 3231Z 72, 74	Scientific and laboratory glassware, reusable and disposable	7017.10.0000, 7017.20.0000, 7017.90.0010, 7017.90.0050	7017.10.0000, 7017.20.0000, 7017.90.0010, 7017.90.0050
3229Z 77, 3231Z 77	Ophthalmic lens blanks and optical instrument lens blanks	7014.00.2000, 7014.00.1000, 7015.10.0000	7014.00.2000, 7014.00.1000, 7015.10.0000
32210 13	Narrow neck glass containers for medicinal and health supplies	7010.10.0500, 7010.90.0500	7010.10.0000, 7010.90.0500
32210 17	Narrow neck containers for toiletries and cosmetics	7010.90.4000	7010.90.2000, 7010.90.3000
32210 11, 15, 19, 23-29	Other narrow neck glass containers	7010.90.5010, 7010.90.5030, 7010.90.5050	7010.90.5010, 7010.90.5030, 7010.90.5050
32210 31-37, 50, 60	Wide mouth glass containers	7010.90.5020, 7010.90.5040	7010.90.5020, 7010.90.5040
PRIMARY METALS			
33211 32, 34, 36, 38, 33217 44, 45	Ductile and gray iron pressure pipe and fittings	7303.00.0060, 7303.00.0090, 7307.11.0060, 7307.19.3000	7303.00.0060, 7303.00.0090, 7307.11.0060, 7307.19.3000
33212 22-24, 33, 79, 33219 39, 41, 97	Other nonmalleable cast iron articles, including manhole covers	7325.10.0000	7325.10.0010, 7325.10.0050
33216 00	Gray iron cast molds and stools for heavy steel ingots	8454.20.0010	8454.20.0010
33218 00, 04	Cast iron soil pipe and fittings, including special fittings	7307.11.0030, 7307.11.0045, 7307.19.9030, 7307.19.9090, 7303.00.0030	7307.11.0030, 7307.11.0045, 7307.19.9030, 7307.19.9090, 7303.00.0030
33221 00, 33222 00	Standard and pearlitic malleable iron castings	7325.99.0000	7325.99.1000
33240 63, 65, 33252 16, 29, 39, 33255 51, 57	Steel castings (except investments)	7302.90.0000, 7325.91.0000	7325.99.5000, 7302.90.0000, 7325.91.0000
33122 11	Carbon steel ingots	7206.10.0000, 7206.90.0000	7206.10.0000, 7206.90.0000
33122 13, 20	Carbon steel, semifinished: blooms, billets, slabs, sheet bars, tin mill bars, tube rounds, and skelp	7207.11.0000, 7207.12.0000, 7207.19.0000, 7207.20.0000	7207.11.0000, 7207.12.0010, 7207.12.0050, 7207.19.0030, 7207.19.0090, 7207.20.0025, 7207.20.0045, 7207.20.0075, 7207.20.0090

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
33122 19	Carbon steel rods	7213.31.0000, 7213.41.0000	7213.31.3000, 7213.31.6000, 7213.41.3000, 7213.41.6000, 7213.50.0020
33124 13, 14	Carbon steel plates	7208.11.0000, 7208.12.0000, 7208.21.0000, 7208.22.0000, 7208.31.0000, 7208.32.0000, 7208.33.0000, 7208.41.0000, 7208.42.0000, 7208.43.0000, 7211.11.0000, 7211.12.0000, 7211.21.0000, 7211.22.0000	7208.11.0000, 7208.12.0000, 7208.21.1000, 7208.21.5000, 7208.22.1000, 7208.22.5000, 7208.31.0000, 7208.32.0000, 7208.33.1000, 7208.33.5000, 7208.41.0000, 7208.42.0000, 7208.43.0000, 7211.11.0000, 7211.12.0000, 7211.21.0000, 7211.22.0045, 7211.22.0090
33123 11, 19	Carbon steel sheet, hot rolled	7208.13.0000, 7208.14.0000, 7208.23.0000, 7208.24.0000, 7208.34.0000, 7208.35.0000, 7208.44.0000, 7208.45.0000, 7208.90.0000, 7210.70.0000, 7211.19.0000, 7211.29.0000	7208.13.1000, 7208.13.5000, 7208.14.1000, 7208.14.5000, 7208.23.1000, 7208.23.5030, 7208.23.5090, 7208.24.1000, 7208.24.5030, 7208.24.5090, 7208.34.1000, 7208.34.5000, 7208.35.1000, 7208.35.5000, 7208.44.0000, 7208.45.0000, 7208.90.0000, 7210.70.3000, 7211.19.1000, 7211.19.5000, 7211.29.1000, 7211.29.3000, 7211.29.5000, 7211.29.7030, 7211.29.7060, 7211.29.7090
33170 14, 15	Carbon steel, finished line pipe	7304.10.1020, 7304.10.1050, 7304.10.1080, 7305.11.1000, 7305.12.1000, 7305.19.1000, 7306.10.1000	7304.10.1020, 7304.10.1030, 7304.10.1045, 7304.10.1060, 7304.10.1020, 7304.10.1030, 7304.10.1045, 7304.10.1060, 7304.10.1080, 7305.11.1030, 7305.11.1060, 7305.12.1030, 7305.12.1060, 7305.19.1030, 7305.19.1060, 7306.10.1010, 7306.10.1050
33167 11	Cold rolled carbon steel sheet	7209.11.0000, 7209.12.0000, 7209.13.0000, 7209.14.0000, 7209.21.0000, 7209.22.0000, 7209.23.0000, 7209.24.5000, 7209.31.0000, 7209.32.0000, 7209.33.0000, 7209.34.0000, 7209.41.0000, 7209.42.0000, 7209.43.0000, 7209.44.0000, 7209.90.0000	7209.11.0000, 7209.12.0030, 7209.12.0090, 7209.13.0030, 7209.13.0090, 7209.14.0030, 7209.14.0090, 7209.21.0000, 7209.22.0000, 7209.23.0000, 7209.24.5000, 7209.31.0000, 7209.32.0000, 7209.33.0000, 7209.34.0000, 7209.41.0000, 7209.42.0000, 7209.43.0000, 7209.44.0000, 7209.90.0000
33123 13	Carbon steel sheet and strip, galvanized by hot dipping	7210.41.0000, 7210.49.0000, 7212.30.0000	7210.41.0000, 7210.49.0030, 7210.49.0090, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000
33123 15	Carbon steel sheet and strip, galvanized by electrolytic method	7210.31.0000, 7210.39.0000, 7212.21.0000, 7212.29.0000	7210.31.0000, 7210.39.0000, 7212.21.0000, 7212.29.0000
33123 17, 18	Other metallic coated sheet and strip, including long ternes and electrical	7210.20.0000, 7210.60.0000, 7210.70.0000, 7210.90.1000, 7210.90.5000, 7212.40.0000, 7212.50.0000, 7212.60.0000	7210.20.0000, 7210.60.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.1000, 7210.90.6000, 7210.90.9000, 7212.40.1000, 7212.40.5000, 7212.50.0000, 7212.60.0000
33167 15	Cold rolled carbon steel strip	7211.30.0000, 7211.41.0000, 7211.49.0000, 7211.90.0000	7211.30.1030, 7211.30.1090, 7211.30.3000, 7211.30.5000, 7211.41.1000, 7211.41.3030, 7211.41.3090, 7211.41.5000, 7211.41.7030, 7211.41.7060, 7211.41.7090, 7211.49.1030, 7211.49.1090, 7211.49.3000, 7211.49.5030, 7211.49.5060, 7211.49.5090, 7211.90.0000
33123 24	Black plate tin mill products	7209.24.1000	7209.24.1000
33123 26	Electrolytic and hot dipped tin plate	7210.11.0000, 7210.12.0000, 7212.10.0000	7210.11.0000, 7210.12.0000, 7212.10.0000
33123 28, 29	All other tin mill products	(NA)	(NA)

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
33124 15, 17	Carbon steel structural shapes (heavy)	7216.31.0000, 7216.32.0000, 7216.33.0000, 7216.40.0000, 7216.50.0000, 7216.60.0000, 7216.90.0000	7216.31.0000, 7216.32.0000, 7216.33.0030, 7216.33.0060, 7216.33.0090, 7216.40.0010, 7216.40.0050, 7216.50.0000, 7216.60.0000, 7216.90.0000
33124 18	Sheet piling and bearing piles, carbon steel	7301.10.0000	7301.10.0000
33124 22	Carbon steel bars, hot rolled (except concrete reinforcing)	7213.20.0000, 7213.39.0000, 7213.49.0000, 7213.50.0000, 7214.10.0000, 7214.30.0000, 7214.40.0000, 7314.50.0000, 7214.60.0000	7213.20.0000, 7213.39.0030, 7213.39.0060, 7213.39.0090, 7213.49.0030, 7213.49.0060, 7213.49.0090, 7213.50.0040, 7213.50.0060, 7213.50.0080, 7214.10.0000, 7214.30.0000, 7214.40.0010, 7214.40.0030, 7214.40.0050, 7214.50.0010, 7214.50.0030, 7214.50.0050, 7214.60.0010, 7214.60.0030, 7214.60.0050, 7215.90.1000
33124 24	Light structural bars (under 3 inches), carbon steel	7216.10.0000, 7216.21.0000, 7216.22.0000	7216.10.0010, 7216.10.0050, 7216.21.0000, 7216.22.0000
33124 26	Concrete reinforcing bars, carbon steel	7213.10.0000, 7214.20.0000	7213.10.0000, 7214.20.0000
33168 11	Cold finished bars, carbon steel	7215.10.0000, 7215.20.0000, 7215.30.0000, 7215.40.0000, 7215.90.0000	7215.10.0000, 7215.20.0000, 7215.30.0000 7215.40.0000 7215.90.3000 7215.90.5000
33124 29	Tool steel, carbon	(NA)	(NA)
3312C 11	Standard tee rails (over 60 lb per yard)	7302.10.1020	7302.10.1010, 7302.10.1035
3312C 13	All other rails, including light (60 lb per yard and under)	7302.10.1030	7302.10.1015, 7302.10.1025, 7302.10.1045, 7302.10.1055
3312C 15, 17	Rail joint bars and tie plates	7302.40.0000	7302.40.0000
3312C 19, 21, 23	Rail wheels, axles (rolled and forged), and track spikes	(NA)	(NA)
33170 14	Carbon steel line pipe 16 inches OD and under	(NA)	(NA)
33170 15	Carbon steel line pipe over 16 OD	(NA)	(NA)
33170 19	Oil country goods (pipe and tubes)	7304.20.1500, 7304.20.5000, 7304.20.7000, 7305.20.3000, 7306.20.1500, 7306.20.6000	7304.20.1010, 7304.20.1020, 7304.20.1030, 7304.20.1040, 7304.20.1050, 7304.20.1060, 7304.20.1080, 7304.20.2010, 7304.20.2020, 7304.20.2030, 7304.20.2040, 7304.20.2050, 7304.20.2060, 7304.20.2080, 7304.20.5015, 7304.20.5030, 7304.20.5045, 7304.20.5060, 7304.20.5075, 7304.20.7000, 7305.20.2000, 7305.20.4000, 7306.20.1030, 7306.20.1090, 7306.20.2000, 7306.20.6010, 7306.20.6050

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
33170 21-24, 29	Carbon steel, finished pipe and tubes (except line pipe and oil country goods)	7304.31.0000, 7304.39.0000, 7305.31.4000, 7305.39.1000, 7305.30.1000, 7306.30.1500	7304.31.6010, 7304.31.6050, 7304.39.0002, 7304.39.0004, 7304.39.0006, 7304.39.0008, 7304.39.0016, 7304.39.0020, 7304.39.0024, 7304.39.0028, 7304.39.0032, 7304.39.0036, 7304.39.0040, 7304.39.0044, 7304.39.0048, 7304.39.0052, 7304.39.0056, 7304.39.0062, 7304.39.0068, 7304.39.0072, 7304.39.0076, 7304.39.0080, 7305.31.4000, 7053.39.1000, 7306.30.1000, 7306.30.5010, 7306.30.5015, 7306.30.5020, 7306.30.5025, 7306.30.5028, 7306.30.5032, 7306.30.5035, 7306.30.5040, 7306.30.5055, 7306.30.5085, 7306.30.5090
33170 27	Carbon steel, finished structural pipe and tubing	7304.90.4000, 7305.90.1000, 7306.60.2500, 7306.90.1000	7304.90.1000, 7304.90.5000, 7305.90.1000, 7306.60.1000, 7306.60.5000, 7306.90.1000
33155 01	Plain flat wire	(NA)	7217.11.1000, 7217.11.2000, 7217.11.3000, 7217.21.1000, 7217.31.1000
33155 02	Thermally treated plain, round wire (under 1.5 mm in diameter)	(NA)	7217.11.5020, 7217.11.5040, 7217.21.3015, 7217.21.3030, 7217.31.3015, 7217.31.3030
33155 03	Thermally treated plain, round wire (1.5 mm in diameter or above)	(NA)	7217.11.7030, 7217.21.3045, 7217.31.3045
33155 04	Other plain round wire (under 1.5 mm in diameter)	(NA)	7217.11.5060, 7217.11.5080, 7217.21.3060, 7217.21.3075, 7217.31.3060, 7217.31.3075
33155 05	Other plain round wire other than thermally treated (1.5 mm in diameter or above)	(NA)	7217.11.7090, 7217.21.3090, 7217.31.3090
33155 06	Other plain wire (except flat or round)	(NA)	7217.11.9000, 7217.21.5000, 7217.31.5000
33155 01-06, 12-14, 16	Plain wire	7217.11.0000, 7217.21.0000, 7217.31.0000	(NA)
33155 15	Wire, plated or coated with zinc (except round but including flat)	(NA)	7217.12.1000, 7217.12.7000, 7217.22.5000, 7217.32.5000
33155 13	Round wire, plated or coated with zinc (under 1.5 mm in diameter)	(NA)	7217.12.3030, 7217.12.3060, 7217.22.1015, 7217.22.1030, 7217.32.1015, 7217.32.1030
33155 14	Round wire, plated or coated with zinc (1.5 mm in diameter or above)	(NA)	7217.12.5000, 7217.22.1050, 7217.32.1050
33155 13-15	Wire plated or coated with zinc	7217.12.0000, 7217.22.0000, 7217.32.0000	(NA)
33155 17, 18, 21	Other coated wire (except zinc)	7217.13.0000, 7217.19.0000, 7217.23.0000, 7217.29.0000, 7217.33.0000, 7217.39.0000	7217.13.1000, 7217.13.3030, 7217.13.3060, 7217.13.5000, 7217.13.7000, 7217.19.1000, 7217.19.5000, 7217.23.1015, 7217.23.1030, 7217.23.1050, 7217.23.5000, 7217.29.1000, 7217.29.5000, 7217.33.1015, 7217.33.1030, 7217.33.1050, 7217.33.5000, 7217.39.1000, 7217.39.5000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
33152 21	Wire nails and staples	(NA)	7317.00.5505, 7317.00.5510, 7317.00.5520, 7317.00.5530, 7317.00.5540, 7317.00.5550, 7317.00.5560, 7317.00.5570, 7317.00.5580, 7317.00.5590, 7317.00.6530, 7317.00.6560, 7317.00.7500
33159 51	Barbed and twisted wire	7313.00.0000	7313.00.0000
33156 21, 33157 71	Woven fence and netting	7314.20.0000, 7314.30.0000, 7314.41.0000, 7314.42.0000, 7314.49.0000	7314.20.0000, 7314.30.1000, 7314.30.5000, 7314.41.0030, 7314.41.0060, 7314.42.0030, 7314.42.0060, 7314.49.3000, 7314.49.6000
33159 55	Wire bale ties	(NA)	(NA)
33151 13	Wire rope and cable	7312.10.8500	7312.10.7000, 7312.10.8000, 7312.10.9030, 7312.10.9060, 7312.10.9090
33151 33	Wire strand for pre-stressed concrete	7312.10.3015	7312.10.3010, 7312.10.3012
33151 35	Other wire strand (except for pre-stressed concrete)	(NA)	(NA)
33122 31	Alloy steel ingots (except stainless)	7224.10.0000	7224.10.0005, 7224.10.0045, 7224.10.0075
33122 37, 41	Steel blooms, billets, slabs, sheet bars, tube rounds, and skelp (except stainless)	7224.90.0000	7224.90.0005, 7224.90.0015, 7224.90.0025, 7224.90.0035, 7224.90.0045, 7224.90.0055, 7224.90.0065, 7224.90.0075
33124 33, 36	Other wire rods, plates, structural shapes, and cold finished strip (except stainless)	(NA)	7225.30.1000, 7225.30.3005, 7225.30.3050, 7225.40.1015, 7225.40.1090, 7225.40.3005, 7225.40.3050, 7225.50.6000, 7226.91.5000
33123 39, 33167 35	Alloy steel, flat rolled (except stainless), finished plate sheet or strip, hot and cold rolled	(NA)	7226.10.1000, 7226.10.5030, 7226.10.5060, 7226.20.0000, 7226.91.0500, 7226.91.1530, 7226.91.1560, 7226.91.2530, 7226.91.2560, 7226.91.7000, 7226.91.8000, 7226.92.1030, 7226.92.1060, 7226.92.3030, 7226.92.3060, 7226.92.5000, 7226.92.7005, 7226.92.7050, 7226.92.8005, 7226.92.8050, 7226.99.0000
33123 31, 39, 33124 33, 36, 33167 31, 35	Alloy steel (except stainless), finished plate, sheet or strip, both hot and cold rolled	7225.10.0000, 7225.20.0000, 7225.30.0000, 7225.40.0000, 7225.50.0000, 7225.90.0000, 7226.10.0000, 7226.20.0000, 7226.91.0000, 7226.92.2000, 7226.92.4000, 7226.99.0000	(NA)
33123 31, 33167 31	Alloy steel (except stainless), finished sheet, hot and cold rolled	(NA)	7225.10.0000, 7225.20.0000, 7225.30.5030, 7225.30.5060, 7225.30.7000, 7225.40.5030, 7225.40.5060, 7225.40.5070, 7225.50.1030, 7225.50.1060, 7225.50.7000, 7225.50.8000, 7225.90.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
33122 39, 33124 38, 41, 33168 31	Alloy steel (except stainless), bars and rods, hot rolled and cold finished, including structural shapes under 3 inches	7227.10.0000, 7227.20.0000, 7227.90.0000, 7228.20.0000, 7228.30.8000, 7228.50.5000, 7228.60.5000, 7228.70.0000, 7228.80.0000	7227.10.0000, 7227.20.0000, 7227.90.1030, 7227.90.1060, 7227.90.2030, 7227.90.2060, 7227.90.6005, 7227.90.6050, 7228.20.1000, 7228.20.5000, 7228.30.8005, 7228.30.8050, 7228.50.5005, 7228.50.5050, 7228.60.6000, 7228.60.8000, 7228.70.3020, 7228.70.3040, 7228.70.3060, 7228.70.3080, 7228.70.6000, 7228.80.0000
32123 35, 37	Other metallic coated sheet and strip, including hot dipped galvanized and electrolytically galvanized sheet and strip	(NA)	7225.10.0000, 7226.10.1000, 7226.10.5030, 7226.10.5060
33124 48	High speed tool steel	7228.10.0000	7228.10.0010, 7228.10.0030, 7228.10.0060
33124 49	Tool steel (except high speed)	7228.30.5000, 7228.50.1000, 7228.60.1000	7228.30.2000, 7228.30.4000, 7228.30.6000, 7228.50.1010, 7228.50.1020, 7228.50.1040, 7228.50.1060, 7228.50.1080, 7228.60.1030, 7228.60.1060
33170 32	Alloy steel (except stainless), finished oil country goods, and line pipe	7304.10.5020, 7304.10.5050, 7304.10.5080, 7304.20.3500, 7304.20.6000, 7304.20.8000, 7305.11.5000, 7305.12.5000, 7305.19.5000, 7305.20.7000, 7306.10.5000, 7306.20.2500, 7306.20.8000	7304.10.5020, 7304.10.5050, 7304.10.5080, 7304.20.3010, 7304.20.3020, 7304.20.3030, 7304.20.3040, 7304.20.3050, 7304.20.3060, 7304.20.3080, 7304.20.4010, 7304.20.4020, 7304.20.4030, 7304.20.4040, 7304.20.4050, 7304.20.4060, 7304.20.4080, 7304.20.6015, 7304.20.6030, 7304.20.6045, 7304.20.6060, 7304.20.6075, 7304.20.8030, 7304.20.8045, 7304.20.8060, 7305.11.5000, 7305.12.5000, 7305.19.5000, 7305.20.6000, 7305.20.8000, 7306.10.5010, 7306.10.5050, 7306.20.3000, 7306.20.4000, 7306.20.8010, 7306.20.8050
33170 43	Pressure tubing, alloy steel (except stainless)	(NA)	7304.51.5015, 7304.51.5045, 7304.59.2030, 7304.59.2040, 7304.59.2045, 7304.59.2055, 7304.59.2060, 7304.59.2070, 7304.59.2080, 7306.50.5010
33170 45, 48, 63-65	All other alloy steel pipe and tubing, including stainless	(NA)	7304.41.0045, 7304.49.0060, 7304.51.1000, 7304.51.5060, 7304.59.1000, 7304.59.6000, 7304.59.8010, 7304.59.8015, 7304.59.8020, 7304.59.8025, 7304.59.8030, 7304.59.8035, 7304.59.8040, 7304.59.8045, 7304.59.8050, 7304.59.8055, 7304.59.8060, 7304.59.8065, 7304.59.8070, 7304.59.8080, 7304.90.7000, 7304.90.3000, 7305.31.6000, 7305.39.5000, 7305.90.5000, 7306.40.1000, 7306.40.5045, 7306.40.5060, 7306.40.5075, 7306.50.1000, 7306.50.3000, 7306.50.5030, 7306.50.5050, 7306.50.5070, 7306.60.3000, 7306.60.7000
33170 43, 45, 48, 31, 62-65	Alloy steel, including stainless, pipes, and tubes	7304.41.0000, 7304.49.0010, 7304.49.0040, 7304.51.0000, 7304.59.0000, 7304.90.6000, 7305.31.6000, 7305.39.5000, 7305.90.5000, 7306.40.1000, 7306.40.5000, 7306.50.1000, 7306.50.4500, 7306.60.6500, 7306.90.5000	(NA)
33155 37	Wire, plain or coated	7229.10.0000, 7229.20.0000, 7229.90.0000	7229.10.0000, 7229.20.0000, 7229.90.1000, 7229.90.5015, 7229.90.5030, 7229.90.5050, 7229.90.9000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
33122 51	Stainless steel ingots	7218.10.0000	7218.10.0000
33122 56	Stainless steel blooms, billets, slabs, sheet bars, tube rounds, and skelp	7218.90.0000	7218.90.0005, 7218.90.0015, 7218.90.0025, 7218.90.0032, 7218.90.0038, 7218.90.0040, 7218.90.0050, 7218.90.0060, 7218.90.0075, 7218.90.0085, 7218.90.0095
33122 59, 33124 61	Stainless steel rods and bars	7221.00.0000, 7222.10.0000	7221.00.0005, 7221.00.0015, 7221.00.0030, 7221.00.0045, 7221.00.0075, 7222.10.0005, 7222.10.0050
32124 53	Stainless steel plates and structurals	7219.11.0000, 7219.12.0000, 7219.21.0000, 7219.22.0000, 7219.31.0000, 7220.11.0000, 7222.40.0000	7219.11.0000, 7219.12.0005, 7219.12.0015, 7219.12.0045, 7219.12.0075, 7219.21.0005, 7219.21.0050, 7219.22.0005, 7219.22.0050, 7219.31.0010, 7219.31.0050, 7220.11.0000, 7222.40.3020, 7222.40.3040, 7222.40.3060, 7222.40.3080, 7222.40.6000
33123 57	Hot rolled stainless steel sheet and strip	7219.13.0000, 7219.14.0000, 7219.23.0000, 7219.24.0000, 7220.12.0000	7219.13.0030, 7219.13.0060, 7219.14.0030, 7219.14.0060, 7219.23.0030, 7219.23.0060, 7219.24.0030, 7219.24.0060, 7220.12.1000, 7220.12.5000
33167 57	Cold rolled stainless steel sheet and strip	7219.32.0000, 7219.33.0000, 7219.34.0000, 7219.35.0000, 7219.90.0000, 7219.20.0000, 7222.09.0000	7219.32.0015, 7219.32.0030, 7219.32.0045, 7219.32.0050, 7219.32.0060, 7219.33.0015, 7219.33.0030, 7219.33.0045, 7219.33.0060, 7219.34.0010, 7219.34.0020, 7219.35.0010, 7219.35.0050, 7219.90.0000, 7220.20.1000, 7220.20.6005, 7220.20.6050, 7220.20.7005, 7220.20.7050, 7220.20.8000, 7220.20.9000, 7220.90.0000
33168 51	Rods and cold finished bars	7222.20.0000, 7222.30.0000	7222.20.0005, 7222.20.0045, 7222.20.0075, 7222.30.0000
33170 61	Stainless steel tubes, pipes, and hollow profiles (seamless for use in bottles and others)	(NA)	7304.49.0030, 7304.51.5030, 7304.59.2030
33170 62	Stainless steel welded pressure tubing	(NA)	7306.40.5010
33155 52	Stainless steel round wire under 0.75 mm in diameter	(NA)	7223.00.1015, 7223.00.1030
33155 53	Stainless steel round wire 0.75 mm to under 1.5 mm in diameter	(NA)	7223.00.1045
33155 54	Stainless steel round wire 1.5 mm and above in diameter	(NA)	7223.00.1060, 7223.00.1075
33155 57	Other shape stainless steel wire, including flat	(NA)	7223.00.5000, 7223.00.9000
33155 52-54, 57	Stainless steel wire, all shapes	7223.00.0000	(NA)
ELECTRONICS			
3357A 10, 12-14, 16, 22	Coaxial cable, armored or unarmored, electronic	8544.20.0000	8544.20.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
3357A 23, 25, 30-31, 33, 35, 37, 3357B 00, 33578 00, 3357C 00, 3357D 00, 33576 00, 3357E 00, 33577 00	All other insulated wire and cable (except coaxial and optical cable)	8544.11.0020, 8544.11.0030, 8544.11.0050, 8544.19.0000, 8544.41.0000, 8544.49.0000, 8544.51.0000, 8544.59.2040, 8544.59.4000, 8544.60.2000, 8544.60.4000, 8544.60.6000	8544.11.0020, 8544.11.0030, 8544.11.0050, 8544.19.0000, 8544.41.0000, 8544.49.0000, 8544.51.4000, 8544.51.8000, 8544.59.2040, 8544.59.2080, 8544.59.4000, 8544.60.2000, 8544.60.4000, 8544.60.6000
33579 12-15, 21	Optical fiber cable	8544.70.0000	8544.70.0000
35713 00 35718 00	Computers, digital, analog, hybrid, and other	8471.10.0000, 8471.20.0030, 8471.20.0060, 8471.20.0090, 8471.91.0030, 8471.91.0060, 8471.91.0090	8471.10.0000, 8471.20.0030, 8471.20.0060, 8471.12.0090, 8471.19.0030, 8471.91.0060, 8471.91.0090
35721 47	Flexible magnetic disk drives	8471.93.4520	8471.93.3020, 8471.93.4030
35721 35, 37, 39, 41, 43, 45	Rigid magnetic disk drives, including disk subsystems and disk arrays	8471.93.4540	8471.93.3040, 8471.93.4050
35721 51, 53, 55, 57, 59, 61, 63, 65, 71, 73, 75, 77, 79	Computer storage devices and equipment, n.e.c.	8471.93.2500, 8471.93.4560, 8471.93.6500	8471.93.1000, 8471.93.1500, 8471.93.2000, 8471.93.3060, 8471.93.4090, 8471.93.5000, 8471.93.6000
35771 41, 43, 45, 72, 74	Computer printers	8471.92.7500	8471.92.6520, 8471.92.6540, 8471.92.6560, 8471.92.6580, 8471.92.7000
35771 33	Computer keyboards	8471.92.2000	8471.92.2000
35751 61, 63, 65, 67, 69, 80	Computer terminals	8471.92.1030, 8471.92.1060, 8471.92.1090	8471.92.1030, 8471.92.1060, 8471.92.1090
35771 56, 58	Monitors, CRT-type	8471.92.4025, 8471.92.4075	8471.92.4025, 8471.92.4075
35771 55, 62	Monitors, n.e.c.	8471.92.5000	8471.92.3000, 8471.92.4085
35771 14, 16, 18, 22, 24, 28	Optical scanning devices and magnetic strip and ink recognition equipment	8471.92.9040	8471.92.9040
35771 02, 04, 06, 08, 12, 26, 29, 35, 47, 49, 51, 53, 63	Computer equipment, n.e.c.	8471.92.9520, 8471.92.9540, 8471.92.9020, 8471.99.9500	8471.92.8065, 8471.92.8085, 8471.92.9020, 8471.92.9060, 8471.92.9080, 8471.99.6000, 8471.99.9000
35771 68, 35772 00	Parts, subassemblies, and accessories for computers and computer peripheral equipment	8473.30.0000	8473.30.4000, 8473.30.8000
35793 00	Duplicating machines	8472.10.0000	8472.10.0000
35784 55	Point-of-sale terminals	8470.50.0020	8470.50.0020
35784 16, 54, 59	Coin or currency handling machines, n.e.c., including cash registers, accounting, bookkeeping, and billing machines, and credit card imprinters	8470.10.0000, 8470.21.0000, 8470.29.0000, 8470.30.0000, 8470.40.0000, 8470.50.0060, 8472.90.2000	8470.10.0060, 8470.21.0000, 8470.29.0000, 8470.30.0000, 8470.40.0000, 8470.50.0060, 8472.90.2010, 8472.90.2020, 8472.90.2030

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
35789 00	Parts for calculating, coin, or currency handling, and accounting machines	8473.21.0000, 8473.29.0000	8473.21.0000, 8473.29.0000, 8473.40.2000
35792 00	Automatic typing and word processing machines (all types)	8469.10.0000	8469.10.0000
35795 00	Mailing, letter handling, and addressing machines	8470.90.0010, 8472.20.0000, 8472.30.0000	8470.90.0010, 8472.20.0000, 8472.30.0000
35799 33	Time recording and time stamping machines	9106.10.0000	9106.10.0000
35799 31-32, 41, 44-45, 95	Office machines, n.e.c.	8472.90.9000, 8470.90.0090	8472.90.4000, 8472.90.8000, 8470.90.0090
3579A 00	Parts for office machines, n.e.c.	8473.40.0000	8473.40.4000
36950 09, 12, 14, 16, 18, 22, 24	Rigid, flexible, and optical disks	8523.20.0000	8523.20.0000
36950 11, 13, 21, 23, 26, 28, 34	Bulk and packaged magnetic tape	8523.11.0000, 8523.12.0020, 8523.12.0040, 8523.12.0060, 8523.13.0020, 8523.13.0040, 8523.13.0060, 8523.13.0080, 8523.12.0010	8523.11.0000, 8523.12.0020, 8523.12.0040, 8523.12.0060, 8523.13.0020, 8523.13.0040, 8523.13.0060, 8523.13.0080, 8523.12.0010
36950 39	Other magnetic recording media, including parts	8523.90.0000	8523.90.0000
36132 16, 21, 26, 31	Power circuit breakers	8536 20.0040, 8535.21.0000, 8535.29.0020, 8535.29.0040	8536.20.0040, 8535.21.0000, 8535.29.0020, 8535.29.0040
36132 17, 22, 27, 32	Parts for power circuit breakers	8538.90.0020	8538.90.0020
36133 11-12, 15, 17, 19, 32, 98	Low voltage panelboards and distribution boards	8537.10.0050	8537.10.0050
36133 21-22	Knife switches	8536.50.0045	8536.50.0045
36134 —	Fuses and fuse equipment, under 2,300 volts	8535.10.0040, 8536.10.0020, 8536.10.0040	8535.10.0040, 8536.10.0020, 8536.10.0040
36135 00	Molded case circuit breakers, 1,000 volts and under	8536.20.0020	8536.20.0020
36136 —	Duct, including plug-in units and accessories	8536.90.0010	8536.90.0010
36139 07, 09-10, 13, 41, 45, 83, 98	Switchgear and switchgear assemblies	8537.10.0020, 8537.20.0020	8537.10.0020, 8537.20.0020
36139 51	Power fuses and fuse links, 2,300 volts and over	8535.10.0020	8535.10.0020
36139 81, 91, 93	Power and ground connectors; and transmission and distribution connectors	8535.90.0040	8535.90.0040

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36251 01, 03-09, 11-14, 16-19, 21-29, 31-33, 35, 38, 52, 59, 61-63, 69, 75, 79, 81-82, 92	Relays	8536.41.0005, 8536.41.0020, 8536.41.0030 8536.41.0045, 8536.41.0050 8536.49.0050, 8536.49.0055 8536.49.0060, 8536.49.0065, 8536.49.0075, 8536.49.0080	8536.41.0005, 8536.41.0020, 8536.41.0030, 8536.41.0045, 8536.41.0050, 8536.49.0050, 8536.49.0055, 8536.49.0060, 8536.49.0065, 8536.49.0075, 8536.49.0080
36252 51, 55	Motion controllers, standalone motor controls, and controls for numerically controlled machine tools	8537.10.0030	8537.10.0030
36252 71	Programmable controllers	8537.10.0060	8537.10.0060
36253 02, 04, 08-09, 11-12, 15	Motor starters	8536.50.0010	8536.50.0010
36253 16	Motor control centers, 1,000 volts or less	8537.10.0040	8537.10.0040
36253 21	Brakes and clutches	8505.20.0000	8505.20.0000
36253 32-33	Limit switches	8536.50.0055	8536.50.0055
36253 81	Rheostats and resistors	8533.40.0040	8533.40.0040
36411 — 36411 26 36411 24 36411 21 36411 22	Electric filament lamps and electric discharge lamps, including ultraviolet and infrared lamps and photoflash lamps; electric luminescent lamps; and arc lamps: Photographic incandescent: Photoflash, including blue AG (all glass) lamps M types (miniature) Flash cubes, all types Other flash lamps	9006.62.0000	9006.62.0000
36411 05	Large incandescent (except photographic and Christmas tree): Tungsten halogen: General lighting	8539.21.2000	8539.21.2000
36411 06	All other	8539.21.4000	8539.21.4000
36411 08 36411 09 36411 12 36411 13 36411 14 36411 19 36411 15 36411 16 36411 17 36411 07 36411 18 36411 28 36411 29 36411 25	General lighting: 15 to 150 watts, 100 to 130 volts, white lamps 15 to 150 watts, 100 to 130 volts, all other Above 150 watts, 100 to 130 volts Three-way, 100 to 130 volts Reflector, 100 to 130 volts: Par type (pressed glass) R type (blown glass) Infrared (all types) Traffic and street lighting, 100 to 130 volts Rough and vibration service, 100 to 130 volts Decorative under 150 watts, 100 to 130 volts (except A line) All other large incandescent (special purpose) lamps, including under 15 watt and other than 100 to 130 volts ² Projection, bulk packed Projection, all other Photoflood, photoenlarger, and other photolamps	8539.22.8010, 8539.22.8050 8539.40.8080, 8539.22.8070 8539.29.4000, 8539.22.8030	8539.22.8010, 8539.22.8050, 8539.40.8080, 8539.22.8070, 8539.29.4000, 8539.22.8030

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36411 61 36411 62 36411 65 36411 67 36411 33 36411 36	Miniature incandescent Automobile glass and metal sealed beams: OEM Replacement All other glass and metal sealed beams: OEM Replacement Automobile miniature other than glass and metal sealed beams: OEM Replacement	8539.10.0020, 8539.10.0040	8539.10.0020, 8539.10.0040
36411 71 36411 72 36411 73 36411 74 36411 75 36411 76 36411 77 36411 78	Flashlight: OEM Replacement Radio panel: OEM Replacement Subminiature lamps (T-2 and below): OEM Replacement All other miniature incandescent, including surgical, medical, and dental instruments: OEM Replacement	8539.29.2500	8539.29.3020, 8539.29.2000, 8539.29.3040
36411 43 36411 46 36411 47 36411 44 36411 45 36411 41 36411 42	Electric discharge (except Christmas tree) Fluorescent, hot cathode Slimline, single pin base, including rapid start Circular, including rapid start High-output 800 milliamper and over, including power grove, VHO, and SHO Other fluorescent lamps, below 40 watts Other fluorescent lamps, 40 watts and over, including preheat rapid start ⁶ Germicidal, bacterial, and ozone Sunlamp bulbs	8539.31.0000	8539.31.0000
36411 51 36411 52 36411 53	Miscellaneous electrical discharge Glow General lighting high intensity lamps Sodium, photochemical, cold cathode fluorescent, and other miscellaneous electrical discharge	8539.39.0020, 8539.39.0040, 8539.39.0060	8539.39.0020, 8539.39.0040, 8539.39.0060, 8539.40.4000, 8539.40.8040
36411 55	Christmas tree lamps, all types	8539.22.4000	8539.22.4000, 8539.29.1000
36431 00	Lampholders	8536.61.0000	8536.61.0000
36434 00	Metal contacts	8538.90.0040	8538.90.0040
36433 60, 63-68, 70-72, 76-77	Switches, other than dimmers ⁹	⁹ 8536.50.0060, ⁹ 8535.30.0040	8536.50.0060, 8535.30.0040
36433 93-95	Switches, dimmers ⁹	⁹ 8533.39.0040	8533.39.0040

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36435 00, 02, 04	Wire connectors ⁹	⁹ 8536.69.0060	8536.69.0060
36442 00	Conduit fittings ⁹	⁹ 8547.90.0020, ⁹ 8547.90.0030, ⁹ 8547.90.0040	8547.90.0020, 8547.90.0030, 8547.90.0040
36451 06-18, 20, 22, 24, 26, 28, 30	Electric lighting fixtures, residential type (except portable)	9405.10.1000	9405.10.4010, 9405.10.6010, 9405.10.8010
36462 11-12, 14, 18-20-22, 24, 26, 28, 30-31, 36, 38, 39, 41, 43-50, 55-57, 59, 61-66, 68, 70, 72, 74, 76, 36463 06, 08, 10-11, 13, 16-17, 19	Electric lighting fixtures, commercial, institutional, and industrial types	9405.10.3000	9405.10.4020, 9405.10.6020, 9405.10.8020
36485 11, 13-15, 17, 20, 22-23, 26-27, 31-35, 39-40, 42-43, 45	Outdoor lighting equipment (except lamps)	9405.40.0000	9405.40.4000, 9405.40.6000, 9405.40.8000
36451 69, 36462 69, 26463 29, 26485 98	Components and renewal parts for lighting fixtures	9405.92.0000, 9405.99.0000	9405.92.0000, 9405.99.2000, 9405.99.4000
36611 41, 43, 45, 49	Private branch telephonic exchange switching apparatus	8517.30.2000	8517.30.2000
36611 23, 28	Central office telephonic switching apparatus	8517.30.1500	8517.30.1500
36611 51, 55, 91	Telephonic switching apparatus, n.e.c.	8517.30.3000	8517.30.3000
36611 98	Parts, components, and subassemblies for telephone switching and switchboard apparatus	8517.90.2000	8517.90.0500, 8517.90.1000, 8517.90.1500
36613 01, 05, 09	Repeaters and line transceivers, carrier line equipment	8518.40.1000	8518.49.1000
36613 30, 33, 36, 41, 45, 49, 51, 55, 59	Carrier line equipment, n.e.c.	8517.40.5000, 8517.40.7000	8517.40.5000, 8517.40.7000
36614 21, 25, 29, 38	Telephone sets (except cordless handset telephones)	8517.10.0000, 8518.30.1000	8517.10.0020, 8517.10.0040, 8517.10.0050, 8517.10.0070, 8517.10.0080, 8518.30.1000
36614 36	Cordless handset telephones	8525.20.5000	8525.20.5000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36613 61, 65	Modems, including auxiliary sets	8517.40.1000	8517.40.1000
36614 41, 43, 45, 47, 49, 51, 59, 97	Telephone and telegraphic equipment, n.e.c., including voice frequency equipment	8517.81.0020, 8517.82.0000, 8517.30.5000	8517.81.0020, 8517.82.0080, 8517.30.5000
36614 55	Telephone key systems	8517.30.2500	8517.30.2500
36614 61, 63, 65, 67, 69	Telephone answering devices	8520.20.0000	8520.20.0040, 8520.20.0080
36614 91	Facsimile communication equipment (complete)	(NA)	8517.82.0040
36614 99	Parts, components, and subassemblies for other telephone equipment	8517.90.5000	8517.90.3000, 8517.90.3500, 8517.90.4000
36632 12	Audio amplifiers and preamplifiers (except consumer and PA types)	8518.40.2000	8518.40.2000
36632 31, 34, 37	Transmitters, transistors, RF power amplifiers, and related equipment	8525.10.6010, 8525.10.6030, 8525.10.6050, 8525.10.6070, 8525.10.6090, 8525.10.8020, 8525.10.8040	8525.10.6020, 8525.10.6040, 8525.10.6060, 8525.10.6080, 8525.10.8000
36632 34, 37	Television transmission apparatus, broadcast only	(NA)	8525.10.2040
36631 35, 42, 44	Mobile radio systems and equipment, including transceivers, and portable receivers, transmitter and receiver, hand held	8525.20.2000, 8525.20.3040, 8525.20.3042, 8525.20.3045, 8525.20.3055, 8525.20.6000, 8525.20.3030, 8529.90.5000, 8527.90.8025, 8525.20.1000	8525.20.2000, 8525.20.3040, 8525.20.3050, 8525.20.3070, 8525.20.3080, 8525.20.6020, 8525.20.6060, 8525.20.6070, 8525.20.6080, 8525.20.3010, 8525.20.3015, 8525.20.3025, 8529.90.5000, 8527.90.8020, 8525.20.0500, 8525.20.1500
36632 13, 17	Other audio equipment, (except consumer and PA types)	(NA)	(NA)
36693 12, 13	Intercommunication systems, including inductive paging systems (selective calling)	8527.90.8015, 8531.80.0035, 8517.81.0010	8527.90.8010, 8531.80.0035, 8517.81.0010
36632 24	Television cameras (except consumer and PA types)	8525.30.0015, 8525.30.0060	8525.30.0010, 8525.30.0030, 8525.30.0040, 8525.30.0060
36631 53, 55, 36632 43	Antennae systems, including broadcasting, transmitting, and community antennae systems	8529.10.2020, 8529.10.2050, 8529.10.4000, 8529.10.6000	8529.10.2020, 8529.10.2050, 8529.10.4040, 8529.10.6000
36632 41, 44, 46, 49	Cable TV and closed circuit TV systems and equipment, including AM and FM transmitters	8525.10.2000	8525.10.2020
36691 48-52, 59	Intrusion detection alarm systems	8531.10.0035	8531.10.0035
36691 53	Smoke and heat detection alarms, ionization type	9022.29.4000	9022.29.4000
36691 54	Smoke and heat detection alarms, n.e.c., including photo cell type	8531.10.0015, 8531.10.0025	8531.10.0015, 8531.10.0025

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36691 56-57	Central station and direct connect fire detection and prevention alarm systems	8531.10.0045	8531.10.0045
36692 42-43	Vehicular and pedestrian traffic control equipment	8530.80.0000, 8530.90.0000	8530.80.0000, 8530.90.0000
36692 45-46	Railway signals and attachments, electric	8530.10.0000	8530.10.0000
36991 81	Electronic trainers and simulators	8805.20.0000	8805.20.0000
36992 83-84, 89, 92, 95, 98	Laser systems and equipment (except medical and communications)	(NA)	(NA)
36992 85	Industrial laser equipment	8456.10.0000	8456.10.1010, 8456.10.1020, 8456.10.5000
36995 00	Ultrasonic equipment, n.e.c.	8456.20.0000, 8479.89.9085	8456.20.1010, 8456.20.1050, 8456.20.5000, 8479.89.9085
36713 12, 17	High vacuum tubes	8540.89.0040	8540.89.0040
36713 23, 26	Gas and vapor tubes	8540.89.0020	8540.89.0020
36713 31, 36, 41	Microwave tubes, klystrons	8540.42.0000	8540.42.0000
36713 45, 50	Microwave tubes, magnetrons	8540.41.0000	8540.41.2000, 8540.41.4000
36713 55, 61, 65-66, 92	Microwave tubes, TWTs	8540.49.0000	8540.49.0000
36713 70, 73, 76	Light sensing tubes	8540.20.2000, 8540.20.4000	8540.20.2040, 8540.20.2080, 8540.20.4000, 8540.20.0060
36713 86, 87	Cathode-ray tubes (CRT's) industrial and military	8540.30.0000	8540.30.0000
36713 81, 88, 91, 96	Other light-emitting devices and special-purpose tubes	8540.89.0080	8540.89.0080
36714 01	Receiving-type electron tubes	8540.81.0000	8540.81.0000
36714 05	Television tubes, black and white, new and rebuilt	8540.12.0000	8540.12.4040, 8540.12.4080, 8540.12.8040, 8540.12.8080
36714 11, 13, 15, 19, 26	Television tubes, color, new and rebuilt	8540.11.0035, 8540.11.0090	8540.11.0010, 8540.11.0020, 8540.11.0030, 8540.11.0040, 8540.11.0050, 8540.11.0060, 8540.11.0080
36715 57	Electron tube parts (except glass blanks)	8540.99.0000, 8540.91.2000, 8540.91.4000	8540.99.0000, 8540.91.2000, 8540.91.4000
36720 12, 14, 16, 18, 22, 24	Printed circuit boards	8534.00.0020, 8534.00.0040, 8534.00.0060	8534.00.0020, 8534.00.0040, 8534.00.0050, 8534.00.0070, 8534.00.0080, 8534.00.0090
36741 10, 11-12	Hybrid integrated circuits	8542.20.0080	8542.20.0080
36741 16	Monolithic integrated circuits, bipolar, TTL	8542.11.0010	8542.11.0011

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36741 17	Monolithic integrated circuits, bipolar, CML/ECLM	8542.11.0015	8542.11.0012
36741 22-25, 35	Monolithic integrated circuits, other bipolar	8542.11.0020	8542.11.0017
36741 27, 29, 33	Monolithic integrated circuits, bipolar memories	8542.11.0005	8542.11.0007
36741 37, 39-48	Monolithic integrated circuits, MOS logic/microprocessors	8542.11.0045	8542.11.0045, 8542.11.0065, 8542.11.0072, 8542.11.0073, 8542.11.0090
36741 50-60	Monolithic integrated circuits, MOS memories	8542.11.0025, 8542.11.0030, 8542.11.0031, 8542.11.0032, 8542.11.0033, 8542.11.0035	8542.11.0025, 8542.11.0030, 8542.11.0031, 8542.11.0032, 8542.11.0033, 8542.11.0035
36741 61-77, 79	Monolithic integrated circuits, other MOS memories	8542.11.0040	8542.11.0040
36741 89	Monolithic integrated circuits, other MOS IC's	8542.11.0050	8542.11.0050
36741 99	Monolithic integrated circuits, other	8542.11.0055, 8542.19.0080	8542.11.0055, 8542.19.0080
36742 63	Transistors, signal	8541.21.0080	8541.21.0080
36742 64	Transistors, power	8541.29.0080, 8541.40.7080	8541.29.0080, 8541.40.7080
36743 22	Signal diodes and assemblies	8541.10.0070	8541.10.0070
36743 42	Semiconductor rectifiers/power diodes and assemblies	8541.10.0080	8541.10.0080
36743 94	Zener diodes	8541.10.0050	8541.10.0050
36743 12	Selenium rectifiers	(¹⁰)	(¹⁰)
36743 83	Microwave diodes	8541.10.0060	8541.10.0060
36749 12	Solar cell	8541.40.6020, 8541.40.6030	8541.40.6020, 8541.40.6030
36749 14, 16	Light emitting diodes	8541.40.2000	8541.40.2000
36749 22	Photodiodes	8541.40.6050	8541.40.8000
36749 24	Optical coupled isolators	8541.40.9060	8541.40.9060
36749 29	Other light sensitive and light-emitting devices	8541.40.9090	8541.40.9500
36749 85	Thyristors	8541.30.0080	8541.30.0080
36749 86, 87	Other semiconductor devices	8541.50.0080	8541.50.0080
36749 94	Chips and wafers for integrated circuits	8542.11.0002, 8542.19.0040, 8542.20.0040	8542.11.0002, 8542.19.0040, 8542.20.0040
36749 96	Chips and wafers for discrete semiconductors	8541.10.0040, 8541.21.0040, 8541.29.0040, 8541.30.0040, 8541.40.6010, 8541.40.7040, 8541.50.0040	8541.10.0040, 8541.21.0040, 8541.29.0040, 8541.30.0040, 8541.40.6010, 8541.40.7040, 8541.50.0040
36749 97	Other semiconductor parts	8541.90.0000, 8542.90.0000	8541.90.0000, 8542.90.0000

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**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
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Product code	Product description	Export number ¹	Import number ²
36750 13	Capacitors, fixed, ac type, less than 300 volts	8532.25.0010	8532.25.0010
36750 16	Capacitors, fixed, ac type, 300 to 599 volts	8532.25.0020	8532.25.0020
36750 17	Capacitors, fixed, ac type, 600 to 999 volts	8532.25.0030	8532.25.0030
36750 18	Capacitors, fixed, ac type, 1,000 volts or more	8532.25.0040	8532.25.0040
36750 19	Capacitors, fixed, dc type, axial lead	8532.25.0060	8532.25.0060
36750 21	Capacitors, fixed, dc type, radial lead	8532.25.0070	8532.25.0070
36750 24	Capacitors, fixed, dc type, chips, and other leaded	8532.25.0080	8532.25.0080
36750 26	Capacitors, fixed, tantalum electrolytic, metal case	8532.21.0020	8532.21.0020
36750 28	Capacitors, fixed, tantalum electrolytic, dipped	8532.21.0040	8532.21.0040
36750 31	Capacitors, fixed, tantalum electrolytic, chips	8532.21.0050	8532.21.0050
36750 33	Capacitors, fixed, tantalum electrolytic, other leaded	8532.21.0080	8532.21.0080
36750 36	Capacitors, fixed, aluminum electrolytic, 18 mm and less	8532.22.0020	8532.22.0020
36750 37	Capacitors, fixed, aluminum electrolytic, over 18 to 35 mm	8532.22.0040	8532.22.0040
36750 41, 43, 45	Capacitors, fixed, other aluminum electrolytic	8532.22.0060	8532.22.0060
36750 47	Capacitors, fixed, ceramic dielectric, single layer, axial	8532.23.0040	8532.23.0040
36750 49	Capacitors, fixed, ceramic dielectric, single layer, radial	8532.23.0060	8532.23.0060
36750 51	Capacitors, fixed, ceramic dielectric, single layer chips	8532.23.0020	8532.23.0020
36750 53	Capacitors, fixed, ceramic dielectric, multilayer, axial	8532.24.0040	8532.24.0040
36750 55	Capacitors, fixed, ceramic dielectric, multilayer, radial	8532.24.0060	8532.24.0060
36750 57	Capacitors, fixed, ceramic dielectric, multilayer, chips	8532.24.0020	8532.24.0020
36750 59	Capacitors, fixed, mica dielectric	8532.29.0020	8532.29.0020

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36750 61	Capacitors, other fixed	8532.25.0050, 8532.29.0040	8532.25.0050, 8532.29.0040
36750 63	Capacitors, variable, mica/ceramic/glass dielectric	8532.30.0010	8532.30.0010
36750 69	Capacitors, other variable	8532.30.0090	8532.30.0090
36750 75	Capacitors, parts	8532.90.0000	8532.90.0000
36760 10, 12, 14, 24-25, 28, 32, 34, 36, 38, 42, 44	Resistors, fixed	8533.10.0020, 8533.10.0042, 8533.10.0057, 8533.10.0070, 8533.21.0025, 8533.21.0045, 8533.21.0075, 8533.21.0090, 8533.29.0000	8533.10.0025, 8533.10.0030, 8533.10.0035, 8533.10.0040, 8533.10.0045, 8533.10.0050, 8523.10.0055, 8533.10.0060, 8533.10.0065, 8533.21.0010, 8533.21.0020, 8533.21.0030, 8533.21.0040
36760 51, 54, 58-59, 61	Resistors, variable, non-wirewound	8533.40.0040, 8533.40.0080	8533.40.0050, 8533.40.0060, 8533.40.0070
36760 65-66, 68-69, 71, 75, 77	Resistors, variable, wirewound, including varistors and thermistors	8533.31.0000, 8533.40.0080	8533.31.0000, 8533.40.0040
36760 79	Resistors, parts	8533.90.0000	8533.90.0000
36770 14, 32, 41, 61, 71, 91	Transformers	8504.31.2000, 8504.31.6000, 8504.31.4030, 8504.31.4060, 8504.32.0000, 8504.32.0020, 8504.32.0040, 8504.34.0000	8504.31.2000, 8504.31.6000, 8504.31.4030, 8504.31.4060, 8504.32.0000, 8504.32.0020, 8504.32.0040, 8504.34.0000
36781 21-22, 24	Connectors, coaxial	8536.69.0010	8536.69.0010
36782 25, 29, 31	Connectors, cylindrical	8536.69.0020	8536.69.0020
36783 35, 42, 44, 46	Connectors, rack and panel	8536.69.0030	8536.69.0030
36784 44, 48-49	Connectors, printed circuit	8536.69.0040	8536.69.0040
36785 54, 59	Connectors, other	¹¹ 8536.69.0060	8536.69.0050, ¹¹ 8536.69.0060
36791 00	Filters (except microwave and piezoelectric devices)	8541.60.0040, 8541.60.0080	8541.60.0010, 8541.60.0020, 8541.60.0030, 8541.60.0040, 8541.60.0050, 8541.60.0060, 8541.60.0080
36796 15, 19, 25, 29	Switches, slide, rotary selector, pushbutton, and snap-action	8536.50.0050, 8536.50.0030, 8536.50.0035, 8536.50.0040	8536.50.0020, 8536.50.0025, 8536.50.0031, 8536.50.0032, 8536.50.0033, 8536.50.0040
36796 11, 21, 31, 98	Switches, other	¹² 8536.50.0060	¹² 8536.50.0060
36799 16-19	Magnetic recording and reproducing heads	8522.90.0010	8522.90.6040, 8522.90.9040
34918 01-04, 06-09	Pneumatic actuated, automatic valves	8481.80.9035	8481.80.9035

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
34918 11-14, 16-18, 21, 23	All other control valves, including electric and electrohydraulic	8481.80.9020, 8481.80.9030, 8481.80.9045, 8481.80.9050	8481.80.9020, 8481.80.9030, 8481.80.9045, 8481.80.9050
34918 25, 30, 35, 41, 45, 48	Self-generating, power-actuated regulator valves	8481.80.9015	8481.80.9015
34919 56, 58-59, 61, 79	Solenoid-operated valves (except nuclear and fluid transfer)	8481.80.9005	8481.80.9005
38121 01	Compasses (magnetic and gyroscopic)	9014.10.1040, 9014.10.1080, 9014.10.6040, 9014.10.6080, 9014.10.7040, 9014.10.7080, 9014.10.9040, 9014.10.9080	9014.10.1000, 9014.10.6000, 9014.10.7030, 9014.10.7060, 9014.10.9000
38121 08, 10, 12-13, 15, 17-18, 20-21, 23, 25-26, 28, 61, 63-64, 77, 80, 85, 89, 38122 11, 13, 15	Search, detection, aeronautical, nautical, and navigational and guidance systems, equipment, and instruments, n.e.c. (except aircraft engine instruments)	9014.20.2000, 9014.20.6000, 9014.20.8040, 9014.20.8080, 9014.90.000	9014.20.2000, 9014.20.6000, 9014.20.8040, 9014.20.8080, 9014.90.2040, 9014.90.2080, 9014.90.6000, 9014.80.1000
38122 17, 19, 21, 23, 25, 27, 29, 31, 33	Radar systems and equipment	8526.10.0010, 8526.10.0020, 8526.10.0070	8526.10.0020, 8526.10.0040
38122 61	Radio navigational aid receivers and displays	8526.91.0010, 8526.91.0030, 8526.91.0070	8526.91.0020, 8526.91.0040
38122 75	Automatic pilots	9014.20.4000, 9014.90.1000	9014.20.4000, 9014.90.1000
38122 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 63, 65, 67, 69, 71, 73, 77-79, 81, 83	Sonar search, detection, tracking, and communication systems and equipment, including ASW (sonar telephone, communication equipment, depth finding, fire control, fusing, guidance, hydrophones, mapping, sonabuys, navigation, sonar fish finders, sonar range instrumentation, and other)	9014.80.2000, 9014.80.6000	9014.80.2000, 9014.80.4000, 9014.80.5000
38220 21-22, 75	Temperature responsive automatic controls (thermostats)	9032.10.000	9032.10.0030, 9032.10.0060, 9032.10.0090
38220 25, 78	Pressure responsive automatic controls (pressurestats and manostats)	9032.20.0000	9032.20.0000
38220 30, 77	Hydraulic and pneumatic controls	9032.81.0080	9032.81.0080
38220 35, 40, 45, 50, 55, 60, 65-69, 71, 74, 81	Automatic controls, n.e.c.	9032.89.6020, 9032.89.6085	9032.89.6015, 9032.89.6020, 9032.89.6025, 9032.89.6085

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
38220 98	Parts and components for automatic controls, sold separately	9032.29.0000	9032.90.2000, 9032.90.4000, 9032.90.6020, 9032.90.6040, 9032.90.6060, 9032.90.6080
38230 00	Process control instruments	9032.81.0040, 9032.81.0080, 9032.89.6030, 9032.89.6040, 9032.89.6050, 9032.89.6060, 9032.89.6070, 9032.89.6075	9032.81.0020, 9032.81.0060, 9032.89.6030, 9032.89.6040, 9032.89.6050, 9032.89.6060, 9032.89.6070, 9032.89.6075
38242 22, 24, 26, 28-29	Gas meters, consumption registering (except parts)	9028.10.0000	9028.10.0000
38242 33, 35, 37, 41, 98	Liquid meters (except parts)	9028.20.0000	9028.20.0000
38242 99	Parts, components, and accessories for gas and liquid meters, sold separately	9028.90.0080	9028.90.0080
38243 82	Parking meters, including parts and components	9106.20.0000	9016.20.0000
38243 76	Taxi meters, including parts	(NA)	9029.10.40000
38243 19, 21, 23, 25, 27, 29, 76, 85, 38244 00, 38291 00, 38253 00	Counting devices, n.e.c., including taxi meters and parts, and motor vehicle instruments	9028.90.0040, 9029.10.0000, 9029.20.4040, 9029.20.5000	9028.90.0040, 9029.10.8000, 9029.20.4040, 9029.20.4080, 9029.90.2000, 9029.90.8040, 9029.90.8080
38243 88, 38291 99	Components and parts for counting devices (except parking meters sold separately)	9028.90.0040, 9029.90.0000	9028.90.0040, 9029.90.2000, 9029.90.8080
38251 00	Electricity meters	9028.30.0000	9028.30.0000
38252 20-22	Voltage, current, and resistance measuring equipment (except multimeters)	9030.39.0040	9030.39.0040
38252 28-30	Multimeters	9030.31.0000	9030.31.0000
38252 25-26, 77	Power and energy testing equipment	9030.39.0080	9030.39.0080
38252 36	Stroboscopes	9029.20.6000	9029.20.6000
38252 37-38	Analyzers for testing characteristics of internal-combustion engines (except aircraft)	9031.80.0060, 9031.80.0070	9031.80.0060, 9031.80.0070
38252 56, 58-59	Signal generating equipment	8543.20.0000	8543.20.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
38252 01-07, 10-12, 14-17, 31-34, 39, 44-45, 47-48, 52, 61, 63, 65, 67, 69, 72, 74, 81, 83, 85, 87, 91-94, 97, 38253 00	Test equipment for testing electrical, radio communication circuits, and motors, n.e.c.	9030.81.0000, 9030.20.0000, 9030.89.0080	9030.81.0000, 9030.89.0080
38252 99	Parts and components for test equipment for testing electrical, radio, and communication circuits and motors	9030.90.4000, 9030.90.8010, 9030.90.8020, 9030.90.8030, 9030.90.8040, 9030.90.8050, 9030.90.8060	9030.90.4000, 9030.90.8010, 9030.90.8020, 9030.90.8030, 9030.90.8040, 9030.90.8050, 9030.90.8060
38210 00, 38260 00	Laboratory, analytical, and scientific instruments	9027.50.5000, 9027.50.1000, 9027.20.4040, 9027.20.2000, 9027.20.5000, 9027.20.9000, 9027.30.4040, 9027.30.4080, 9027.80.2000, 9027.80.3000, 9027.80.3500, 9027.80.8000, 9027.90.0000, 9012.10.0000	9027.50.4015, 9027.50.4010, 9027.20.4040, 9027.20.4050, 9027.20.4060, 9027.20.4080, 9027.20.8030, 9027.20.8060, 9027.20.8090, 9027.30.4040, 9027.30.4080, 9027.80.4020, 9027.80.4030, 9027.80.4060, 9027.80.4090, 9027.90.4000, 9027.90.8000, 9012.10.0000, 9027.80.8020, 9027.80.8030, 9027.80.8060, 9027.80.8090
38271 00	Sighting, tracking, and fire-control equipment, optical type	9013.10.2000, 9013.10.4000	9013.10.1000, 9013.10.3000, 9013.10.4000
38272 00	Binoculars and astronomical instruments	9005.10.0020, 9005.10.0040, 9005.10.0080, 9005.80.4020, 9005.80.4040, 9005.80.6000, 9005.90.0000	9005.10.0020, 9005.10.0040, 9005.10.0080, 9005.80.4020, 9005.80.4040, 9005.80.6000, 9005.90.0000
38273 00	Optical instruments and lenses, n.e.c.	9031.40.0080, 9031.90.4000	9031.40.0080, 9031.90.4000
38273 15	Microscopes, optical	9011.10.0000, 9011.20.0000, 9011.80.0000, 9011.90.0000	9011.10.4000, 9011.10.8000, 9011.20.4000, 9011.20.8000, 9011.80.0000, 9011.90.0000
38292 00	Physical properties testing and inspection equipment and kinematic testing and measuring equipment	9024.10.0000, 9024.80.0000, 9024.90.0000	9024.10.0000, 9024.80.0000, 9024.90.0040, 9024.90.0060
38294 00	Nuclear radiation detection and monitoring instruments and equipment	9030.10.0000, 9030.90.4000	9030.10.0000, 9030.90.4000
38295 34	Liquid-in-glass thermometers, clinical	9025.11.2000	9025.11.2000
38295 22-24	Liquid-in-glass thermometers, n.e.c.	9025.11.4000	9025.11.4000
38295 25-26, 29	Thermometers, except liquid-in-glass type	9025.19.0000	9025.19.0040, 9025.19.0080
38295 45	Geophysical instruments and equipment	9015.80.8040	9015.80.8040
38295 40	Seismic instruments	9015.80.6000	9015.80.6000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
38295 20, 28, 31, 51	Commercial, geophysical, meteorological, and general-purpose instruments, n.e.c.	9025.20.0000, 9025.80.0000, 9015.80.8080	9025.20.4000, 9025.20.8000, 9025.80.1000, 9025.80.2000, 9025.80.3000, 9025.80.4000, 9025.80.5000, 9025.90.0000, 9015.80.8080
38296 11, 19	Surveying instruments, except photogrammetrical and geodetic equipment	9015.10.0000, 9015.20.0000, 9015.30.0000	9015.10.4000, 9015.10.8000, 9015.20.4000, 9015.20.8000, 9015.30.4000, 9015.30.8000, 9015.90.0010, 9015.90.0020, 9015.90.0030
38296 31, 39	Photogrammetrical and geodetic equipment (except cameras)	9015.40.0000	9015.40.4000, 9015.40.8000, 9015.90.0040
38296 21	Drafting instruments and machines, manual and automatic	9017.10.0000, 9017.20.4000, 9017.20.8000	9017.10.0000, 9017.20.4000, 9017.20.8090
38296 29	Parts and components for drafting instruments and machines	9017.90.0000	9017.90.0000
38440 02, 03, 05, 06, 09, 11, 32	Medical X-ray and nuclear equipment, diagnostic and therapeutic	9022.11.0000, 9022.21.0000	9022.11.0000, 9022.21.0000
38440 13	Industrial and scientific X-ray equipment	9022.19.0000	9022.19.0000
38440 21	X-ray tubes sold separately	9022.30.0000	9022.30.0000
38440 27	Parts and accessories for X-ray equipment and other non-medical irradiation equipment, n.e.c.	9022.90.4000, 9022.90.6000, 9022.90.8000	9022.90.4000, 9022.90.6000, 9022.90.9000
39440 23	Non-medical irradiation equipment, including gamma- and beta-ray equipment, n.e.c.	9022.29.8000	9022.29.8000
38450 11	Electrocardiograph (ECG), diagnostic	9018.11.0040	9018.11.0040
38450 13, 15	Electroencephalographs (EEG) and electromyographs (EMG), diagnostic	9018.19.8035	9018.19.8035
38450 17	Ultrasound scanning devices, diagnostic	9018.19.8045	9018.19.8045
38450 31	Pacemakers, therapeutic	9021.50.0000	9021.50.0000
38450 18, 21, 23, 25, 29	Diagnostic electromedical equipment, n.e.c.	9018.19.4000, 9018.19.8030, 9018.19.8050	9018.19.4000, 9018.19.8030, 9018.19.8050
38450 33, 34, 37, 41, 49	Therapeutic electromedical equipment, n.e.c.	9018.90.7060	9018.90.7060, 9018.20.0040
38450 71, 73, 75, 83	Electromedical equipment and irradiation equipment, including X-ray, n.e.c.	9018.20.0000, 9018.90.7080	9018.20.0080, 9018.90.7080
38450 39	Dialyzers, machines and equipment	9018.90.7020	9018.90.7020
38450 51, 53, 55, 57	Patient monitoring equipment	9018.19.8020	9018.19.8020
38450 43	Therapeutic ultrasound equipment	9018.90.7040	9018.90.7040

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
38450 35	Electrosurgical equipment	9018.90.6000	9018.90.6000
38450 89	Electromedical parts and accessories, including diagnostic and therapeutic, n.e.c.	9018.11.0080, 9018.19.8060, 9018.90.7070	9018.11.0080, 9018.19.8060, 9018.90.7070, 9021.90.4060
	CONSUMER DURABLES		
35341 37, 51, 75, 77, 81, 83, 91, 92, 98	Oscillating electric fans, desk and wall bracket (all sizes) Nonoscillating electric fans, desk and wall bracket (all sizes) 20-inch reversible and nonreversible window permanent type fans Other than 20-inch reversible and nonreversible window permanent type fans Portable window fans (household, suitcase type) (all sizes) Roll about fans (mounted on portable stand) (all sizes) Ceiling (paddle) fans All other household type ventilating and exhaust fans All other electric household type fans	8414.51.0010, 8414.51.0090	8414.51.0090, 8415.51.0030
36341 84 85, 86	Electric range hoods, ducted Electric range hoods, nonducted Oven hoods, ducted and nonducted	8414.60.0000	8414.60.0000
36345 16, 17, 23, 24, 29, 39, 41, 42, 54, 55, 87, 89	Broilers, without rotisseries Broilers with rotisseries Deep fat fryers Ovens and roasters, including toaster ovens Hot plates and disc stoves, 1650 watts and less, (except built in units) Waffle irons, sandwich grills, griddles, and combinations Casseroles, chafing dishes, and crockpots (slow cookers) Frying pans, skillets Corn poppers, hot air type Corn poppers, other than hot air type Electric heating pads, including foot warmers Other small electrothermal household appliances, including immersion heaters, faucet attachment water heaters, steam radiators, pressure cookers, automatic sauce pans, warming trays, food warmers, and bottle warmers,	8516.60.6000, 8516.79.0000	8516.60.6000, 8516.79.0000
36345 18, 19, 21	Coffee makers, drip type Coffee makers, percolator or vacuum type Coffee makers, urn type	8516.71.0000	8516.71.0000, 8516.71.0020, 8516.71.0040, 8516.71.0060
36345 36	Toasters	8516.72.0000	8516.72.0000
36345 43	Portable room heaters, fan-forced type	(NA)	8516.29.0030

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36345 44	Other portable room heaters (except fan forced type), convector, radiant, etc.	(NA)	8516.29.0060
36345 50	Irons, standard household, steam and spray	8516.40.0000	8516.40.2000, 8516.40.4000
36345 63	Other irons (except steam and spray), standard household and travel		
36345 83	Electric blankets	6301.10.0000	6301.10.0000
36345 86	Hair curlers and curling irons	8516.32.0000	8516.32.0020, 8516.32.0040
36345 94, 95	Hair dryers with bonnets Hair dryers without bonnets	8516.31.0000	8516.31.0000
36345 90, 96	Portable air purifiers and dehumidifiers Portable humidifiers, including vaporizers	8479.89.6040, 8509.80.0060	8479.89.1000, 8509.80.0050, 8509.80.0070, 8509.80.0080
36345 13, 15	Electric razors, men's Electric razors, women's	8510.10.0000	8510.10.0000
36345 71, 75, 76, 77	Household food mixers, hand (portable) Household food mixers, stand type Blenders (liquefiers) Ice crushers	8509.40.0020	8509.40.0025, 8509.40.0015
36345 81 36345 82	Household food processors Household food preparation appliances (except food mixers and food processors), drink mixers, whippers, juicers, grinders, etc.	8509.40.0040, 8509.40.0030	8509.40.0040, 8509.40.0030
36345 93	Can openers, single-purpose units and combinations	8509.80.0040	8509.80.0040
36345 99	Other small electromechanical appliances (knives, knife sharpeners, scissors, toothbrushes, vibrators, etc.)	(NA)	9603.21.0080, 8509.80.0090
36349 11	Parts and attachments for household electric fans	8414.90.1000	8414.90.1000
36311 11, 21, 24, 26, 35, 53, 55, 61, 65, 79, 36314 14, 27	Electric ranges and ovens	8516.60.4000	8516.60.4090
36311 73-74	Microwave ovens	8516.50.0000	8516.50.0000, 8516.60.4060
36311 85	Parts and accessories for electric ranges and ovens	8516.90.2000	8516.90.2000
36313 11, 13, 15, 17, 19, 21, 23, 39, 36314 11	Gas ranges and ovens	7321.11.5000	7321.11.3000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36313 85	Parts for gas cooking stoves	7321.90.6050 pt.	7321.90.3000
36314 12	Other cooking appliances (solid fuel)	7321.13.0070	7321.13.0060, 7321.13.0080
36314 13, 26	Other cooking appliances (liquid fuel)	7321.12.0000	7321.12.0000
36314 22	Other cooking appliances (gas fuel) (portable)	7321.11.1000	7321.11.1000
36314 24	Other cooking appliances (solid fuel) (portable)	7321.13.0050	7321.13.0020, 7321.13.0040
36314 29	Parts and accessories for other cooking equipment	7321.90.6050 pt.	7321.90.6030, 7321.90.6090
36321 01	Compressor type refrigerator, fitted with separate doors: 6.4 ft ³ and under (under 184 liters)	8418.10.0010	8418.10.0010
36321 03	6.5 to 9.4 ft ³ (184 liters but under 269 liters)	8418.10.0020	8418.10.0020
36321 09	9.5 to 13.4 ft ³ (269 liters but under 382 liters)	8418.10.0030	8418.10.0030
36321 12, 14, 19, 24, 26	13.5 cu. ft ³ and over (382 liters and over)	8418.10.0040	8418.10.0040
36321 62	Non-compressor household refrigerator-freezers with separate external doors, all sizes	8418.10.0090	8418.10.0090
36321 63	Compressor type refrigerator, fitted with one external door: 6.4 ft ³ and under (under 184 liters)	8418.21.0010	8418.21.0010
36321 65	6.5 to 9.4 ft ³ (184 liters, but under 269 liters)	8418.21.0020	8418.21.0020
36321 69	9.5 to 13.4 ft ³ (269 liters but under 382 liters)	8418.21.0030	8418.21.0030
36321 73	13.5 ft ³ and over (382 liters and over)	8418.21.0090	8418.21.0090
36321 74	Absorption, electrical fitted with one external door	8418.22.0000	8418.22.0000
36321 79	Other household refrigerators	8418.29.0000	8418.29.0000
36322 01, 03-04, 07-10, 12	Freezers, upright type	8418.40.0000	8418.40.0000
36322 51, 57, 61, 67	Freezers, chest type	8418.30.0000	8418.30.0000
36330 11	Fully automatic electric washing machine (coin-operated)	8450.11.0010	8450.11.0010
36330 31	Fully automatic electric washing machines (non coin-operated)	8450.11.0090	8450.11.0090

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36330 37	Other washing machines	8450.12.0000, 8450.19.0000	8450.12.0000, 8450.19.0000
36330 51, 55	Dryers (non coin-operated)	8451.21.0090	8451.21.0090
36330 59	Other drying equipment	8451.29.0010, 8451.29.0090	8451.29.0010, 8451.29.0090
36330 15	Dryers (coin-operated)	8451.21.0010	8451.21.0010
36391 11-12, 14-15	Water heaters, electric, storage type	8516.10.0040	8516.10.0040
36391 98	Water heaters, electric, other	8516.10.0080	8516.10.0080
36392 12	Water heaters, gas	8419.11.0000	8419.11.0000
36392 24, 32, 52	Water heaters, non-electric, other than gas	8419.19.0040, 8419.19.0080	8419.19.0020, 8419.19.0040, 8419.19.0060
36395 12, 14	Dishwashing machines, household	8422.11.0000	8422.11.0000
36395 63	Floor polishers	8509.20.0000	8509.20.0000
36395 71	Kitchen waste disposals	8509.30.0000	8509.30.0000
36395 72	Household trash compactors	(NA)	(NA)
36395 75	Sewing machines, household	8452.10.0000	8452.10.0010, 8452.10.0090
36395 60	Other household appliances	(NA)	(NA)
36395 91	Electric water heater parts	(NA)	(NA)
36395 92	Non-electric water heater parts	(NA)	8419.90.1000
36395 93	Dishwashing machine parts, household	8422.90.0540	8422.90.0540
36395 94	Floor polisher parts	8509.90.3000	8509.90.3000
36395 95	Food waster disposal parts	(NA)	(NA)
36395 96	Trash compactor parts	(NA)	(NA)
36395 98	Sewing machine parts, household	8452.90.0010	8452.90.0010
36395 97	Other major household parts	(NA)	(NA)
36511 34, 39, 41	Automotive audio equipment	8527.21.0000, 8527.29.0000	8519.91.0020, 8527.21.1010, 8527.21.1020, 8527.21.1030, 8527.29.0020, 8527.29.0040, 8527.29.0060
36512 18, 31, 41, 51, 61	Household television receivers	8528.10.4000, 8528.10.8010, 8528.10.8040, 8528.10.8043	8528.10.8012, 8528.10.8014, 8528.10.8015, 8528.10.8020, 8528.10.8024, 8528.10.8028, 8528.10.8030, 8528.10.8035, 8528.10.8038, 8528.10.8042, 8528.10.4000, 8528.10.8045, 8528.10.8050, 8528.10.8055, 8528.10.8058, 8528.10.8060, 8528.20.0005, 8528.20.0010, 8528.20.0020, 8528.20.0025, 8528.20.0030, 8528.20.0035, 8528.20.0040, 8528.20.0045, 8528.20.0050, 8528.20.0055, 8528.20.0060

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
36514 52, 61, 67, 69, 78, 81, 83	Coin-operated audio equipment, power amplifiers, audio tape recorders and players, compact and video disc players, equalizers, and other consumer audio and video equipment (except speakers)	8518.40.2000, 8519.10.0000, 8519.91.0000, 8519.99.0030, 8519.99.0070, 8520.31.0000, 8520.39.0000, 8521.90.0000	8518.40.2000, 8519.10.0000, 8519.91.0040, 8519.91.0060, 8519.91.0080, 8519.99.0030, 8519.99.0045, 8519.99.0060, 8520.31.0020, 8520.31.0040, 8520.31.0060, 8520.31.0070, 8520.31.0090, 8520.39.0010, 8520.39.0050, 8520.39.0060, 8520.39.0070, 8521.90.0000
36515 51	Single loudspeakers mounted in an enclosure	8518.21.0000	8518.21.0000
36515 52	Multiple loudspeakers mounted in an enclosure	8518.22.0000	8518.22.0000
36515 53	Other loudspeakers	8518.29.0000	8518.29.0000
36515 55	Microphones	8518.10.0000	8518.10.0020
36515 67, 94	Home-type electronic kits designed for consumer assembly and public address systems, including musical instrument amplifiers	8518.50.0000, 8527.39.0000	8518.50.0000, 8527.39.0020, 8527.39.0040
36799 07	Earphones, headsets, and phonograph cartridges, pickups, needles, and styli	8518.30.2000, 8522.10.0000	8518.30.2000, 8522.10.0000
INDUSTRIAL EQUIPMENT			
35851	Heat transfer equipment	8415.81.0010, 8415.81.0020, 8415.81.0030, 8415.82.0030, 8415.82.0035, 8415.82.0040, 8415.83.0040, 8415.83.0070, 8418.61.0040, 8418.61.0080, 8418.69.0010, 8418.69.0015, 8418.69.0045, 8418.69.0050, 8418.69.0055, 8418.69.0060	8415.81.0010, 8415.81.0020, 8415.81.0030, 8415.82.0030, 8415.82.0035, 8415.82.0040, 8415.83.0040, 8415.83.0070, 8418.61.0040, 8418.61.0080, 8418.69.0010, 8418.69.0015, 8418.69.0045, 8418.69.0050, 8418.69.0055, 8418.69.0060
35852	Unitary air-conditioners (except room)	8415.82.0005, 8415.82.0010, 8415.82.0015, 8415.82.0020, 8415.82.0025, 8415.82.0065, 8415.83.0050, 8415.83.0060, 8415.83.0090, 8418.69.0090, 8418.69.0095	8415.82.0005, 8415.82.0010, 8415.82.0015, 8415.82.0020, 8415.82.0025, 8415.82.0065, 8415.83.0050, 8415.83.0060, 8415.83.0090, 8418.69.0090, 8418.69.0095
35853 43	Mechanical drinking water coolers	8418.69.0020	8418.69.0020
35854	Compressors and compressor units	8414.30.4000, 8414.30.8010, 8414.30.8020, 8414.30.8030, 8414.30.8050, 8414.30.8060, 8414.30.8070, 8414.30.8080, 8414.30.8090	8414.30.4000, 8414.30.8010, 8414.30.8020, 8414.30.8030, 8414.30.8050, 8414.30.8060, 8414.30.8070, 8414.30.8080, 8414.30.8090
35855	Refrigeration condensing units	8414.99.0005, 8414.99.0010, 8414.99.0015, 8414.99.0020, 8414.99.0025	8414.99.0005, 8414.99.0010, 8414.99.0015, 8414.99.0020, 8414.99.0025
35856	Room air-conditioners and dehumidifiers	8415.10.0040, 8415.10.0060, 8415.10.0080, 8415.82.0050	8415.10.0040, 8415.10.0060, 8415.10.0080, 8415.82.0050
35856	Nonelectric warm air furnaces and humidifiers	(¹⁰)	(¹⁰)
34921 34922 34923	Hydraulic valves, nonaerospace Pneumatic valves, nonaerospace Aerospace hydraulic and pneumatic valves	8481.20.0000	8481.20.0000
34924 34925 34926 35692	Fittings for metal and plastic tubing, including assemblies Fittings and couplings for hose, including assemblies, nonaerospace Aerospace fittings for tube and hose, including assemblies Filters for fluid power systems	(¹⁰)	(¹⁰)

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
34927	Parts for hydraulic and pneumatic valves	8481.90.9010	8481.90.9020, 8481.90.9040
35931 35932	Hydraulic and pneumatic cylinders and related items, nonaerospace Aerospace hydraulic and pneumatic cylinders	8412.21.0015, 8412.21.0030, 8412.21.0045, 8412.21.0060, 8412.21.0075, 8412.31.0040, 8412.31.0080, 8412.29.8015, 8412.29.8030, 8412.29.8045, 8412.29.8060, 8412.29.8075, 8412.39.0040, 8412.39.0080, 8479.89.9065	8412.21.0015, 8412.21.0030, 8412.21.0045, 8412.21.0060, 8412.21.0075, 8412.31.0040, 8412.31.0080, 8412.29.8015, 8412.29.8030, 8412.29.8045, 8412.29.8060, 8412.29.8075, 8412.39.0040, 8412.39.0080, 8479.89.9065
35933	Parts for hydraulic and pneumatic cylinders and related items	8412.90.9010, 8412.90.9030	8412.90.9010, 8412.90.9030
35941 10	Fluid power pumps and motors	8413.50.0070, 8413.50.0080, 8413.60.0020, 8413.60.0030, 8413.60.0040	8413.50.0070, 8413.50.0080, 8413.60.0020, 8413.60.0030, 8413.60.0040
35942 10	Parts for pumps and motors	8413.91.9050	8413.91.9050
35611 01-02, 04	Reciprocating pumps	8413.50.0090	8413.50.0090
35611 05, 07-08, 10	Turbine pumps, vertical	8413.81.0020	8413.81.0020
35611 83-91, 35615 77-78	Submersible centrifugal pumps, industrial and domestic	8413.70.2004	8413.70.2004
35611 11-12, 14	Centrifugal pumps, single stage, single suction, close coupled, 1/2-inch discharge outlet through 1-1/2 inches	8413.70.2005	8413.70.2005
35611 15-16, 19	Centrifugal pumps, single stage, single suction, close-coupled, 2-inch discharge outlet to over 4 inches	8413.70.2015	8413.70.2015
35611 21-24	Centrifugal pumps, single stage, single suction, frame mounted, 1/2-inch discharge outlet through 2-1/2 inches	8413.70.2022	8413.70.2022
35611 25-26, 29	Centrifugal pumps, single stage, single suction, frame mounted, 3-inch discharge outlet to over 12 inches	8413.70.2025	8413.70.2025
35611 42, 44, 46, 48-49	Centrifugal pumps, single stage, double suction, from under 4-inch discharge outlet to over 12 inches	8413.70.2030	8413.70.2030
35611 52, 54, 56, 58-59	Centrifugal pumps, multistage, single or double suction, up to 8-inch discharge outlet and over	8413.70.2040	8413.70.2040
35611 62, 64-66, 69	Other centrifugal pumps, including propeller and mixed flow, and can type	8413.70.2090, 8413.70.1000	8413.70.2090, 8413.70.1000
35611 70-79, 35615 73	Rotary pumps, domestic and industrial	8413.60.0070, 8413.60.0090	8413.60.0070, 8413.60.0090
35611 82, 92	Diaphragm pumps, all sizes, industrial type	8413.50.0050	8413.50.0050
35611 97, 35615 97, 95	Other pumps, not elsewhere classified, including appliance pumps	8413.20.0000, 8413.81.0040	8413.20.0000, 8413.81.0040

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
35613 13, 20, 26-28, 70	Domestic water systems	8413.81.0030	8413.81.0030
35615 11, 13, 15	Oil well and oilfield pumps	8413.50.0010, 8413.60.0050	8413.50.0010, 8413.60.0050
35631 29, 33-34, 36-39	Air compressors, portable	8414.40.0000, 8414.80.1095	8414.40.0000, 8414.80.1085, 8414.80.1090
35631 01-06	Stationary reciprocating air compressors, single and double acting	8414.80.1018, 8414.80.1042, 8414.80.1055	8414.80.1005, 8414.80.1015, 8414.80.1025, 8414.80.1035, 8414.80.1040, 8414.80.1045, 8414.80.1055
35631 42-43	Gas compressors, stationary, axial and centrifugal	8414.80.2010	8414.80.2010
35631 07, 10-15, 17, 19	Air compressors, stationary, rotary positive, centrifugal, and axial	8414.80.1060, 8414.80.1067, 8414.80.1075, 8414.80.1080	8414.80.1060, 8414.80.1065, 8414.80.1070, 8414.80.1075, 8414.80.1080
35631 46-48, 51, 53, 56	Reciprocating and rotary gas compressors	8414.80.2050, 8414.80.2060, 8414.80.2070	8414.80.2050, 8414.80.2060, 8414.80.2070
35631 89	All other compressors	8414.80.9000	8414.80.9000
35631 93-94	Vacuum pumps	8414.10.0000	8414.10.0000
35621 01, 02, 03, 04, 05, 07, 09, 11, 12, 13, 14, 16, 19, 21, 22, 23, 25	Annular, ball bearings, including self aligning: Miniature (below 9 mm. OD) regular (ABEC 1 and 3) Miniature (below 9 mm. OD) precision (ABEC 1 and 3) Other regular, 9 mm. OD through 30 mm. OD Other regular, over 30 mm. OD through 52 mm. OD Other regular, over 52 mm. OD through 100 mm. O.D Other regular, over 100 mm. OD Other precision, 9 mm. OD through 30 mm. OD Other precision, over 30 mm. OD through 52 mm. OD Other precision, over 52 mm. OD through 100 mm. OD Other precision, over 100 mm. OD Single row maximum capacity type Double row Angular contact All other ground or precision bearings (ABEC 1 and up) Ground bearings of less than ABEC 1 precision Unground, including self-aligning	8482.10.5032, 8482.10.5036, 8482.10.5044, 8482.10.5048, 8482.10.5052, 8482.10.5056, 8482.10.5060, 8482.10.5064	8482.10.5032, 8482.10.5036, 8482.10.5044, 8482.10.5048, 8482.10.5052, 8482.10.5056, 8482.10.5060, 8482.10.5064
35621 15, 17	Integral shaft ball bearings	8482.10.1040, 8482.10.1080	8482.10.1040, 8482.10.1080
35621 33, 35, 53, 55	Other ball bearings	8482.10.5004, 8482.10.5008, 8482.10.5012, 8482.10.5016, 8482.10.5024, 8482.10.5028, 8482.10.5068	8482.10.5004, 8482.10.5008, 8482.10.5012, 8482.10.5016, 8482.10.5024, 8482.10.5028, 8482.10.5068

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
35622 32-34	Tapered roller bearings, including cone and tapered roller assemblies	8482.20.0020, 8482.20.0030, 8482.20.0040, 8482.20.0060, 8482.20.0070, 8482.20.0080, 8482.99.3010	8482.20.0020, 8482.20.0030, 8482.20.0040, 8482.20.0060, 8482.20.0070, 8482.20.0080, 8482.99.3010
35623 11-12	Cylindrical roller bearings	8482.50.0000	8482.50.0000
35623 24-25	Spherical roller bearings	8482.30.0040, 8482.30.0080	8482.30.0040, 8482.30.0080
35623 41	Needle roller bearings	8482.40.0000	8482.40.0000
35623 51, 93	Linear bearings Other roller bearings	8482.80.0020, 8482.80.0040, 8482.80.0060, 8482.80.0080	8482.80.0020, 8482.80.0040, 8482.80.0060, 8482.80.0080
35624 17	Mounted ball bearings	8483.20.4040, 8483.20.8040	8483.20.4040, 8483.20.8040
35624 53, 55	Mounted roller bearings	8483.20.4080, 8483.20.8080	8483.20.4080, 8483.20.8080
35629 11	Balls	8482.91.0010, 8482.91.0020	8482.91.0010, 8482.91.0020
35629 31	Rollers	8482.91.0050, 8482.91.0070, 8482.91.0080, 8482.91.0090	8482.91.0050, 8482.91.0070, 8482.91.0080, 8482.91.0090
35629 21, 35-39, 49, 59	Other antifriction ball and roller bearing components and parts, including unassembled bearing cages, housing closures, collars, and races, etc.	8482.91.0040, 8482.99.1010, 8482.99.1050, 8482.99.3050, 8482.99.5000, 8482.99.7030, 8482.99.7060, 8482.99.7090	8482.91.0040, 8482.99.1010, 8482.99.1050, 8482.99.3050, 8482.99.5000, 8482.99.7030, 8482.99.7060, 8482.99.7090
36211 00	Fractional horsepower motors and generators	8501.10.3000, 8501.10.4040, 8501.10.4060, 8501.10.4080, 8501.10.6020, 8501.10.6040, 8501.10.6060, 8501.10.6080, 8501.20.2000, 8501.20.3000, 8501.31.2000, 8501.31.3000, 8501.31.8000, 8501.40.2040, 8501.40.3040, 8501.51.2040, 8501.51.3040	8501.10.2000, 8501.10.4020, 8501.10.4040, 8501.10.4040, 8501.10.4060, 8501.10.4080, 8501.10.6040, 8501.10.6060, 8501.10.6080, 8501.20.2000, 8501.20.4000, 8501.20.5000, 8501.31.2000, 8501.31.4000, 8501.31.5000, 8501.31.8000, 8501.40.2040, 8501.40.4040, 8501.40.5040, 8501.51.2040, 8501.51.4040, 8501.51.5040
36212 13	Integral horsepower motors and generators	8501.20.6000, 8501.31.6000, 8501.32.2000, 8501.32.4000, 8501.32.6000, 8501.33.2000, 8501.33.3000, 8501.33.4040, 8501.33.4060, 8501.33.6000, 8501.34.3000, 8501.34.6000, 8501.40.6040, 8501.51.6040, 8501.52.4000, 8501.52.8000, 8501.53.4000, 8501.53.6000, 8501.53.8040, 8501.53.8060, 8501.61.0000, 8501.62.0000, 8501.63.0000, 8501.64.0020, 8501.64.0030, 8501.64.0050	8501.20.6000, 8501.31.6000, 8501.32.2000, 8501.32.4020, 8501.32.4040, 8501.32.6000, 8501.33.2040, 8501.33.2080, 8501.33.3000, 8501.33.4040, 8501.33.4060, 8501.33.6000, 8501.34.3000, 8501.34.6000, 8501.40.6040, 8501.51.6040, 8501.52.4000, 8501.52.8020, 8501.51.6040, 8501.52.4000, 8501.52.8020, 8501.52.8040, 8501.53.4040, 8501.53.4080, 8501.53.6000, 8501.53.8040, 8501.53.8060, 8501.61.0000, 8501.62.0000, 8501.63.0000, 8501.64.0020, 8501.64.0030, 8501.64.0050
36214, 17-18, 19	Electric generating sets, rotating converters, and parts	8502.11.0000, 8502.12.0000, 8502.13.0020, 8502.13.0040, 8502.20.0040, 8502.20.0080, 8502.30.0000, 8502.40.0000, 8503.00.2000, 8503.00.5000, 8503.00.6040, 8503.00.6060	8502.11.0000, 8502.12.0000, 8502.13.0020, 8502.13.0040, 8502.20.0030, 8502.20.0060, 8502.00.0080, 8502.30.0000, 8502.40.0000, 8503.00.2000, 8503.00.4000, 8503.00.6020, 8503.00.6040, 8503.00.6060
HEAVY MACHINERY			
35231 10, 12, 14, 30, 3523F 21, 35244 12, 15, 17, 19	Farm-type wheel tractors	8701.90.1005, 8701.90.1010, 8701.90.1015, 8701.90.1030, 8701.90.1035, 8701.90.1040, 8701.90.1045, 8701.90.1050, 8701.90.1055, 8701.90.1060, 8701.90.1065, 8701.90.1070	8701.90.1005, 8701.90.1010, 8701.90.1015, 8701.90.1030, 8701.90.1035, 8701.90.1040, 8701.90.1045, 8701.90.1050, 8701.90.1055, 8701.90.1060, 8701.90.1065, 8701.90.1070

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
35232 03, 04, 08	Dairy farm mechanical installations, including milking machines and vacuum outfits	8434.10.0000	8434.10.0000
35232 11	Cream separator machines	8421.11.0000	8421.11.0000
35232 19, 30, 40, 44, 45, 46, 47, 49, 50, 51, 58, 59, 61, 62, 67, 68	Sprayers and dusters, except serial types	8424.81.1000, 8424.81.9030	8424.81.1000, 8424.81.9030
35233 20, 22, 24, 40, 77	Planting machinery	8432.30.0010, 8432.30.0090	8432.30.0010, 8432.30.0090
35233 50, 58, 59, 61, 65	Fertilizer distributors, pull-type or mounted	8432.40.0000	8432.40.0000
3523C 41, 43, 53, 54, 59, 61	Other harrows, rollers, pulverizers, and similar equipment	8432.29.0090	8432.29.0090
3523C 44	Disc harrows	8432.21.0000	8432.21.0000
35235 11	Combines	8433.51.0010, 8433.51.0090	8433.51.0010, 8433.51.0090
35235 21, 31, 41, 78, 79	Other harvesting machines	8433.59.0090, 8433.53.0000	8433.59.0090, 8433.53.0000
35235 63, 70	Field forage harvesters	8433.59.0010	8433.59.0010
35236 13, 23, 3523E 01, 05, 07, 09	Hay mowers, mower-conditioners, and windrowers	8432.80.0000, 8433.20.0020, 8433.20.0040, 8433.20.0060	8432.80.0000, 8433.20.0020, 8433.20.0040, 8433.20.0060
35236 31, 82	Other haymaking machinery	8433.30.0000	8433.30.0000
35236 55	Balers, including pickup balers	8433.40.0000	8433.40.0000
3523C 02	Moldboard plows	8432.10.0020	8432.10.0020
3523C 15, 17, 19, 21, 23, 25, 27	Other plows	8432.10.0040, 8432.10.0060	8432.10.0040, 8432.10.0060
3523C 70, 80, 90, 94	Cultivators and weederers	8432.29.0040, 8432.29.0060, 8432.29.0080	8432.29.0040, 8432.29.0060, 8432.29.0080
3523E 11, 13, 14	Machinery for preparing animal feed	8436.10.0000	8436.10.0000
3523E 07, 09, 23	Other machines for preparing crops for market or for use	8419.31.0000, 8436.80.0060	8419.31.0000, 8436.80.0060
3523E 31, 33, 35	Farm poultry incubators and brooders	8436.21.0000	8436.21.0000
3523E 36	Nests and cages (poultry equipment)	8436.29.0000	8436.29.0000

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
3523E 39, 43, 48, 50, 55, 59, 61, 63, 64, 71, 79, 85	Other barn and barnyard equipment	8436.80.0040, 8436.80.0080	8436.80.0040, 8436.80.0080
3523E 98	Self-propelled irrigation systems, center-pivot	8424.81.9010	8424.81.9010
3523E 99	All other self-propelled irrigation systems using 100-foot flexible hose feeder line and over	8424.81.9020	8424.81.9020
3523E 88, 90, 91, 92, 94, 95	Farm wagons and other farm transportation equipment	8716.80.1000	8716.80.1000
3523F 01, 13	Other commercial and turf grounds mowers	8433.19.0040, 8433.19.0050	8433.19.0040, 8433.19.0050
3523F 03, 07	Riding turf mowers	8433.19.0010, 8433.19.0030	8433.19.0010, 8433.19.0030
3523F 09, 11	Flail and gang mowers	8433.19.0020	8433.19.0020
35241 01, 11, 12, 15, 35244 03, 07, 08, 10, 11	Mowers for lawns, parks, or sports grounds	8433.11.0010, 8433.11.0020, 8433.11.0030, 8433.11.0040, 8433.11.0050, 8433.11.0060	8433.11.0010, 8433.11.0020, 8433.11.0030, 8433.11.0040, 8433.11.0050, 8433.11.0060
35241 41, 42	Snowblowers (snowthrowers)	8430.20.0030, 8430.20.0060	8430.20.0030, 8430.20.0060
35241 50, 54, 55	Powered lawn and hedge trimmers	8467.89.5030, 8508.80.0070	8467.89.5030, 8508.80.0070
3531A 13, 20, 22, 24	Contractors off-highway wheel tractors for use as towing unit	8701.90.5015, 8701.90.5020, 8701.90.5025	8701.90.5015, 8701.90.5020, 8701.90.5025
3531A 34	Rubber-tired dozers	8429.19.0010	8429.19.0010
3531A 37	Wheeled log skidders, self-propelled	8701.90.1001	8701.90.1001
3531B 30, 36	Crawler tractors net engine horsepower (nehp): Under 159 nehp	8701.30.0015, 8701.30.0030	8701.30.1015, 8701.30.5015, 8701.30.1030, 8701.30.5030
3531B 40	160 nehp and over	8701.30.0045, 8701.30.0060, 8701.30.0075	8701.30.1045, 8701.30.5045, 8701.30.1060, 8701.30.5060, 8701.30.1075, 8701.30.5075
3531C 60	Skid steer loaders; 4-wheel drive, skid steer	8429.51.1060	8429.51.1060
3531C 71-74	Wheel loaders, rear engine mount, integral design; 4-wheel drive, non-skid steer	8429.51.1015, 8429.51.1025, 8429.51.1030, 8429.51.1035, 8429.51.1040, 8429.51.1045, 8429.51.1050, 8429.51.1055	8429.51.1015, 8429.51.1025, 8429.51.1030, 8429.51.1035, 8429.51.1040, 8429.51.1045, 8429.51.1050, 8429.51.1055
3531C 81	Crawler loaders: Under 90 nehp	8429.51.5010, 8429.51.5020	8429.51.5010, 8429.51.5020
3531C 84	90 nehp and over	8429.51.5030, 8429.51.5040, 8429.51.5050	8429.51.5030, 8429.51.5040, 8429.51.5050
3531E 03	Excavators, cable operated, crawler mounted	8429.52.1020	8429.52.1020
3531E 05-07	Excavators, hydraulic operated, crawler mounted	8429.52.1010	8429.52.1010

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
3531E 19	Excavators, hydraulic operated, wheel (rubber) mounted, all sizes	8429.52.1030	8429.52.1030
3531E 20, 26, 29, 41, 57	Cranes, crawler mounted	8426.99.0000	8426.99.0000
3531E 37-38, 51-54, 65-66, 68	Cranes, wheel mounted	8705.10.0010, 8705.10.0050	8705.10.0010, 8705.10.0050
3531E 82, 86	Cranes, pedestal or shipmounted	8426.30.0000	8426.30.0000
3531E 95	Dragline buckets, attachment	8431.41.0060	8431.41.0060
3531E 97	Clamshell/grapple attachment	8431.41.0040	8431.41.0040
3531F 33, 34	Concrete pavers	8479.10.0040	8479.10.0040
3531F 66, 71, 75, 80	Bituminous pavers	8479.10.0060	8479.10.0060
3531F 60, 62, 64	Concrete pumps	8413.40.0000	8413.40.0000
3531G 01, 03, 05	Scraper bowls	8430.62.0000	8430.62.0000
3531G 11, 17	Motor graders and light maintainers	8429.20.0000	8429.20.0000
3531G 21, 23, 26, 29, 31, 33, 35	Self-propelled static compaction equipment	8429.40.0040	8429.40.0040
3531G 37, 39, 42, 45, 47, 49, 51, 53, 55, 57	Self-propelled vibratory compaction equipment	8429.40.0020	8429.40.0020
3531G 91	Towed type rollers and compactors	8430.61.0000	8430.61.0000
3531G 71	Off-highway rear dump haulers	8704.10.5020, 8704.10.5030, 8704.10.5040, 8704.10.5050	8704.10.5020, 8704.10.5030, 8704.10.5040, 8704.10.5050
3531G 73	Off-highway, integral, self-powered side and bottom dumps, including coal haulers	8704.10.5060	8704.10.5060
3531G 75, 77	All other off-highway, truck-type tractor chassis	8704.10.1000	8704.10.1000
3531H 01	Construction machinery for mounting: Sidebooms or pipehandlers	8428.90.0030	8428.90.0030
3531H 03	Dozers, for crawler and wheel tractors	8431.42.0000	8431.42.0000
3531H 05, 07	Winches (towing, logging, and oil-field types)	8425.31.0000, 8425.39.0000	8425.31.0000, 8425.39.0000
3531H 09, 11	Backhoes	8431.49.9005	8431.49.9005
3531H 13	Front-end loaders	8431.49.9010	8431.49.9010
3531H 17	Rippers and rooters	8431.49.9015	8431.49.9015

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
3531K 14-16	Self-propelled continuous ditchers and trenchers (integral units): Ladder-type digging element	8429.59.5020	8429.59.5020
3531K 18	Wheel-type digging element	8429.59.5040	8429.59.5040
3531K 41-44, 35327 33, 37, 41	Portable crushing plants and stationary grinding mills and pulverizers	8474.20.0010, 8474.20.0070	8474.20.0010, 8474.20.0070
3531K 45, 46, 35326 52-59, 61-65, 67, 69, 35327 56-58	Sorting, screening, separating, or washing machines	8474.10.0010, 8474.10.0090	8474.10.0010, 8474.10.0090
35325 14, 16, 18, 19, 42, 43, 77, 98, 35328 52, 53, 60, 70, 80, 35355 64	Rock breaking machines, coal or rock cutters, and tunneling machinery	8430.31.0000, 8430.39.0000, 8430.50.0000, 8430.69.0000	8430.31.0040, 8430.31.0080, 8430.39.0040, 8430.39.0080, 8430.50.5000, 8430.69.0000
35325 33, 35, 37, 38, 58	Underground mine loader machines	8428.90.0040	8428.90.0040
35325 57, 59, 72, 73, 75, 76, 78	Mine wagon pushers, locomotive or wagon traversers, wagon tippers, and similar railway wagon handling equipment	8428.50.0000	8428.50.0000
35327 10, 12, 13, 17, 19	Stationary crushing machines	8474.20.0050	8474.20.0050
35328 02	Pneumatic hand-held rotary rock drills	8467.11.5010,	8467.11.5010
35191	Gasoline engines (except outboard marine, aircraft, automobile, highway truck, bus, and tank)	8407.29.0010, 8407.29.0050, 8407.90.1010, 8407.90.1050, 8407.90.9030, 8407.90.9050, 8407.31.0000, 8407.32.5000, 8407.33.5000, 8407.34.5000	8407.29.0010, 8407.29.0020, 8407.29.0030, 8407.29.0040, 8407.90.1010, 8407.90.1060, 8407.90.1080, 8407.90.9020, 8407.90.9040, 8407.90.9060, 8407.90.9080, 8407.31.0040, 8407.31.0080, 8407.32.1000, 8407.32.9040, 8407.32.9080, 8407.33.1030, 8407.33.1060, 8407.33.1090, 8407.33.9040, 8407.33.9080, 8407.34.1030, 8407.34.1060, 8407.34.1090, 8407.34.9000
35193	Nonautomotive diesel, semi-diesel, and dual fuel engines	8408.10.0010, 8408.10.0020, 8408.10.0030, 8408.10.0040, 8408.10.0050, 8408.90.1000, 8408.90.9010, 8408.90.9020, 8408.90.9030, 8408.90.9040, 8408.90.9050, 8408.20.5000	8408.10.0005, 8408.10.0015, 8408.10.0020, 8408.10.0030, 8408.10.0040, 8408.10.0050, 8408.90.1040, 8408.90.1080, 8408.90.9010, 8408.90.9020, 8408.90.9030, 8408.90.9040, 8408.90.9050, 8408.20.9000, 8408.20.1040, 8408.20.1080
35194	Automotive diesel, semi-diesel, and dual fuel engines	8408.20.2000	8408.20.2000
35196	Piston-type natural gas engines, including LPG engines	8407.90.9010	8407.90.9010

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
3541D 10	Boring machines, excluding multifunction NC machines, machining centers: All boring machines valued under \$3,025 each	8459.39.0020, 8459.40.0020	8459.39.0020, 8459.40.0020
3541D 16	Machines valued at \$3,025 each or more: Horizontal boring, drilling, and milling machines, including floor, table, and rail mounted	8459.31.0010, 8459.31.0040, 8459.39.0040	8459.31.0010, 8459.31.0040, 8459.39.0040
3541D 40	Precision boring machines, including horizontal, vertical, and all other precision boring machines	8459.31.0070, 8459.39.0050, 8459.40.0040, 8459.40.0050, 8459.40.0070, 8459.40.0080	8459.31.0070, 8459.39.0050, 8459.40.0040, 8459.40.0050, 8459.40.0070, 8459.40.0080
3541D 46	Jig boring and all other boring machines, except boring lathes		
3541D 05	Drilling machines, excluding machining centers: All drilling machines valued under \$3,025 each	8459.29.0020	8459.29.0020
3541D 15	Machines valued at \$3,025 each or more: Vertical, upright drilling machines, including plain upright and heavy duty	8459.29.0070	8459.29.0070
3541D 25	Radial drilling machines, including plain and universal	8459.29.0050	8459.29.0050
3541D 45 3541D 55	Multiple spindle drilling machines (cluster of spindles driven from one central power unit): Adjustable joint and fixed-center type All other automatic, multiple-spindle drilling machines, including indexing turret head (fixed column and table)	8459.29.0040	8459.29.0040
3541D 35	Deep hole drilling machines	8459.21.0080	8459.21.0080
3541D 65	All other drilling machines, n.e.c., including bench type sensitive, vertical n.e.c., radial n.e.c.	8459.29.0090	8459.29.0090
35413 00	Gear cutting machines, including gear hobbers, shapers, teeth-finishing, bevel gear generators, and all other gear cutting machines	8461.40.1050, 8461.40.1070, 8461.40.1090, 8461.40.5040, 8461.40.5060	8461.40.1050, 8461.40.1070, 8461.40.1090, 8461.40.5040, 8461.40.5060
35414 10	Grinding, polishing, buffing, honing, and lapping machinery, (except gear tooth grinding, lapping, polishing, and buffing machines): All grinding, polishing, buffing, honing, and lapping machines valued under \$3,025 each	8460.39.0020, 8460.40.0020, 8460.90.0020	8460.39.0020, 8460.40.0020, 8460.90.0020

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
35414 11, 13, 14, 42, 55	Machines valued at \$3,025 each or more: External cylindrical grinding machines: Plain, including angular wheel types Universal Roll, chucking, centerless, and other cylindrical grinding machines All other disc grinders, includes bench, floor, snag, double spindle grinders, and abrasive belt grinders All other grinding machines n.e.c., including internal cylindrical type, planer type, and thread grinding machines	8460.21.0080, 8460.29.0010, 8460.29.0030, 8460.29.0050	8460.21.0080, 8460.29.0010, 8460.29.0030, 8460.29.0050
35414 34, 37, 33, 39	Surface grinding machines: Reciprocating table type, including face grinders: Horizontal and vertical Hand surface type Rotary table type, horizontal and vertical All other surface grinding machines, including planer type	8460.11.0080, 8460.19.0010, 8460.19.0050	8460.11.0080, 8460.19.0010, 8460.19.0050
35414 52	Tool and cutter grinding machines, including universal and special	8460.31.0080, 8460.39.0050	8460.31.0080, 8460.39.0050
35414 75, 79, 84	Honing and lapping machines (except gear honing and lapping): Internal, including combination bore, hone, and external Flat surface lapping machines, except gear lapping All other honing and lapping or polishing machines, including speed lathes and multistation type	8460.40.0060, 8460.40.0080, 8460.90.0060, 8460.90.0080	8460.40.0060, 8460.40.0080, 8460.90.0060, 8460.90.0080
35415 09	Lathes (turning machines): All lathes valued under \$3,025 each	8458.19.0020, 8458.99.5060	8458.19.0020, 8458.99.5060
35415 15, 16-18	Machines valued at \$3,025 each or more: Horizontal spindle: Multiple spindle NC turning machine Single-spindle NC turning machine: Small Medium Large	8458.11.0010, 8458.11.0030, 8458.11.0050, 8458.11.0090	8458.11.0010, 8458.11.0030, 8458.11.0050, 8458.11.0090
35415 22	Vertical spindle	8458.91.1060, 8458.91.1080, 8458.91.5050, 8458.91.5070	8458.91.1060, 8458.91.1080, 8458.91.5050, 8458.91.5070
35415 23	Horizontal-spindle nonnumerically controlled turning machines: Engine or toolroom lathes, all types	8458.19.0030	8458.19.0030

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
35415 83	Automatic lathes: Single spindle	8458.19.0050	8458.19.0050
35415 88, 67,57	Multiple spindle: Bar (screw) machines Chucking machines All other horizontal turning machines	8458.19.0070, 8458.19.0090	8458.19.0070, 8458.19.0090
35415 86	Vertical spindle: All vertical turning machines	8458.99.1050, 8458.99.5090	8458.99.1050, 8458.99.5090
35416 09	Milling machines, excluding machining centers: All milling machines valued under \$3,025 each	8459.59.0020, 8459.69.0020	8459.59.0020, 8459.69.0020
35416 23	Machines valued at \$3,025 each or more: General-purpose, knee milling machines, all types	8459.51.0080, 8459.59.0030	8459.51.0080, 8459.51.0030
35416 32, 53, 62	Automatic and manufacturing bed type: Single-spindle, multiple-spindle and special-purpose machines Profile machines and duplicators, including spar and skin millers All other milling machines, n.e.c., including planer type and thread-milling machines	8459.61.0080, 8459.69.0050, 8459.69.0070, 8459.69.0090	8459.61.0080, 8459.69.0050, 8459.69.0070, 8459.69.0090
3541A 05 3541A 07	Machining centers (multifunctions NC machines): Drill, mill, and bore, vertical (automatic tool change): Y-axis travel less than 20" Y-axis travel 20" through 26"	8457.10.0015	8457.10.0015
3541A 09	Y-axis travel over 26"	8457.10.0025	8457.10.0025
3541A 11 3541A 13 3541A 15	Drill, mill, and bore, horizontal (automatic tool change): Y-axis travel less than 27" Y-axis travel 27" through 40" Y-axis over 40"	8457.10.0035	8457.10.0035
3541A 01 3541A 03 3541A 17 3541A 19	Drill, mill, bore, (manual tool change): Vertical Horizontal Machining center with automatic multiple spindle head changing capability All other machining centers, including special machining centers, special adapting of standard machining centers, and machining centers with indexing turret	8457.10.0045	8457.10.0045
3541B 31	Station type machines: Dial or rotary, trunnion, and center column Transfer (free, palletized shuttle) Other station type, n.e.c.	8457.20.0010, 8457.20.0090, 8457.30.0010, 8457.30.0090	8457.20.0010, 8457.20.0090, 8457.30.0010, 8457.30.0090
3541C 41	Other metal cutting machine tools: Other metal cutting machine tools, n.e.c., valued under \$3,025	8459.70.0060, 8461.10.0040, 8461.20.0070, 8461.30.0040, 8461.50.0020, 8461.90.0020	8459.70.0060, 8461.10.0040, 8461.20.0070, 8461.30.0040, 8461.50.0020, 8461.90.0020

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
3541C 51	Machines valued at \$3,025 each or more: Broaching machines, including internal surface and all other broaching machines	8461.30.0060, 8461.30.0080	8461.30.0060, 8461.30.0080
3541C 53,55, 59, 61	Sawing and cutoff machines: Power hack saws Circular cutoff saws (cold) Band saws All other sawing and cutoff machines, including contour sawing and filing	8461.50.0050, 8461.50.0090	8461.50.0050, 8461.50.0090
3541C 64	Spark erosion, ultrasonic and electrolytic machines, all types	8456.30.0000, 8456.20.0000, 8456.90.0000	8456.30.1050, 8456.30.1070, 8456.30.1010, 8456.30.1030, 8456.20.1010, 8456.20.1050, 8456.90.1005, 8456.90.1060
3541C 91	Miscellaneous metal cutting machine tools, including rifling, centering, keyseating, pointing, chamfering, facing, shaving, grooving, countersinking, burring, reaming, screw and nut slotting machines, threading planers, and shapers	8461.90.0040, 8461.90.0080	8461.90.0040, 8461.90.0080
35421 08	Punching and shearing machines: All punching and shearing machines valued under \$3,025 each	8462.39.0020, 8462.49.0020	8462.39.0020, 8462.49.0020
35421 12, 14, 15, 11, 16, 19	Machines valued at \$3,025 or more: Power operated only: Plate shearing machines (squaring, slitting, etc.): Mechanical Hydraulic Bar, angle, and rotary shearing machines Punches, including combination punching and shearing machines Punching machines fixed position and two axes positioning table Other power-operated punching and shearing machines	8462.31.0080, 8462.39.0050, 8462.41.0080, 8462.49.0050	8462.31.0080, 8462.39.0050, 8462.41.0080, 8462.49.0050
35421 33, 34, 37, 35, 43, 47, 49	Bending and forming machines: All bending and forming machines valued under \$3,025 Machines valued at \$3,025 each or more: Press brakes all types Bending rolls, sheet, and plate Bending rolls, angles, bars, shapes, and tubes Rotary bending and forming machines, including rotary head Ram and press bending machines (pipe, bar, etc.,) Other bending and forming machines, including folders	8462.29.0020, 8462.29.0030, 8462.29.0040, 8462.21.0080, 8462.29.0050	8462.29.0020, 8462.29.0030, 8462.29.0040, 8462.21.0080, 8462.29.0050

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
35422 01, 12, 02, 03	Presses (except forging presses): All presses valued under \$3,025 each Machines valued at \$3,025 each or more: Mechanical: Open back inclinable (gap type): 50 tons and under 51 tons to 120 tons 121 tons and over	8462.99.0020	8462.99.0020
35422 16-18, 45,53, 56-57	Vertical straight sided and arch frame, excluding knuckle joint, and including cam and crank: Single action: Single point Two point 300 tons and under 301 tons and over Automatic presses, strip or coil field Other mechanical presses, including end wheel type bulldozer, double and triple action, and transfer fed presses, four point and knuckle joint, excluding automated lines of standard equipment Hydraulic presses (metalworking only) Vertical single action, all tonnages Housing or straight side type Column type (open rod)	8462.99.0040	8462.99.0045
35422 58-60, 92	Gap or C-frame: 15 tons and under 16 tons to 35 tons Over 35 tons Other hydraulic and pneumatic presses, including horizontal	8462.91.0060, 8462.91.0090, 8462.99.0030, 8462.99.0060	8462.91.0060, 8462.91.0090, 8462.99.0030, 8462.99.0060
35423 20	Forging machines, including forging presses and die stamping presses	8462.10.0030, 8462.10.0050	8462.10.0030, 8462.10.0050
35423 97	All other metal forming type machine tools: All other metal forming type machine tools valued under \$3,025 each	8463.20.0060, 8463.90.0060	8463.20.0060, 8463.90.0060
35423 55	Machines valued at \$3,025 each or more: Die casting machines, all types	8454.30.0010	8454.30.0010
35423 43	Thread rolling machinery	8463.20.0080	8463.20.0080
35423 30, 49 93	Metal container-making machinery Riveting machines (except handheld portable types) All other metal forming type machine tools, n.e.c.	8463.90.0080	8463.90.0080
AEROSPACE			
37215 01	Unladen weight not exceeding 2,000 kg (4,409 lb), single engine	8802.20.0015, 8802.20.0040	8802.20.0015, 8802.20.0040

See footnotes at the end of the table.

**COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES
WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1992—Continued**

Product code	Product description	Export number ¹	Import number ²
37215 03	Unladen weight not exceeding 2,000 kg (4,409 lb), multi-engine	8802.20.0050	8802.20.0050
37215 05	Unladen weight exceeding 2,000 kg (4,409 lb), but not exceeding 15,000 kg (33,069 lbs)	8802.30.0030, 8802.30.0040, 8802.30.0050, 8802.30.0060	8802.30.0030, 8802.30.0040, 8802.30.0050, 8802.30.0060
37215 07	Unladen weight exceeding 15,000 kg (33,069 lb)	8802.40.0040, 8802.40.0060, 8802.40.0070	8802.40.0040, 8802.40.0060, 8802.40.0070
37215 32	Helicopters, rotary-wing, powered, of an unladen weight not exceeding 2,000 kg (4,409 lb)	8802.11.0030, 8802.11.0045	8802.11.0030, 8802.11.0045
37215 34	Helicopters, rotary-wing, powered, of an unladen weight exceeding 2,000 kg (4,409 lb)	8802.12.0040	8802.12.0040
37215 35	Balloons, dirigibles, and airships	8801.90.0000	8801.90.0000
37215 37	Gliders, sailplanes	8801.10.0060	8801.10.0060
37242 01	Spark-ignition reciprocating or rotary internal-combustion engines	8407.10.0020, 8407.10.0040	8407.10.0020, 8407.10.0040
37242 03	Turbojet and turbofan engines: Of a thrust not exceeding 25 kN (5,620 lb)	8411.11.4010	¹³ 8411.11.4000
37242 05	Of a thrust exceeding 25 kN (5,620 lb)	8411.12.4010	¹³ 8411.12.4000
37242 07	Turboshaft (turbo propeller) engines: Of a power not exceeding 1,100 kW (820 hp)	8411.21.4010	¹³ 8411.21.4000
37242 09	Of a power exceeding 1,100 kW (820 hp)	8411.22.4010	¹³ 8411.22.4000
37242 14	Other, including auxiliary power units, excluding missile and space engines	8411.81.4010, 8411.82.4010	¹³ 8411.81.4000, ¹³ 8411.82.4000

(NA) Not available. n.e.c. Not elsewhere classified. pt. Partial.

¹Source: 1992 edition, *Harmonized System-Based Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States*.

²Source: *Harmonized Tariff Schedule of the United States, Annotated* (1992).

³The export numbers represent the same numbers used for leather uppers, leather soles, made with steel safety toes.

⁴The import numbers represent the same numbers used for leather uppers, leather soles, made with steel safety toes.

⁵The export numbers represent the same numbers used for leather uppers, athletic, other.

⁶The import numbers represent the same numbers used for leather uppers, athletic, other.

⁷Production figures do not include data for rolled and wire glass.

⁸Export and import figures include data for rolled and wire glass.

⁹This code is partially correlated with the products described.

¹⁰Import/export classification not directly comparable.

¹¹Harmonized system codes include product code 36435 00.

¹²Harmonized system codes include "switches" of product code 36433 00.

¹³Includes some military.

APPENDIX C. INSTRUCTIONS FOR CURRENT INDUSTRIAL REPORT DATA USERS, FOR ACCESSING THE CENSUS-BEA ELECTRONIC FORUM TO GET CURRENT DATA ON U.S. INDUSTRIAL ACTIVITY

The Census-BEA Electronic Forum is an electronic bulletin board where data users may retrieve industry data on the production, inventories, and orders of various manufacturing products using a communication modem on the user's personal computer (PC). The electronic bulletin board supports public messages, private E-mail, bulletins, file downloads, and on-line questionnaires.

A data user must register with the FORUM and read the NEWUSER Information before being able to access data. Before making your first call, please have the following answers available to provide the correct registration information: Brand name of your PC, dimensions of your monitor's screen (80 columns by 24 lines or other), whether your monitor supports color, the baud rate (or speed) at which your modem communicates, the software package your PC uses to make calls (such as CrossTalk, PC Plus, ProComm, PC-Talk, or SmartComm). Decide on your password before calling. During your initial call, you must read all of the NEWUSER Message and provide complete, correct answers to the on-line Registration Questionnaire. Doing both will result in full access privileges to FORUM.

Refer to the instructions for your communications software to learn how to enter the telephone number and parameters of the FORUM in the dialing directory of your communications software. If you use a long distance service other than AT&T, be sure to include the prefix. To access the Census-BEA Electronic Forum, please dial 301-763-7554. Your communications modem should be set as follows:

Baud Rate: 1200, 2400, and 9600

Parity : None

Data Bits: 8

Stop Bits: 1

Duplex : Full

After dialing into the FORUM, follow the screen prompts and answer all questions for new users. Read the NEWUSER Message which gives the rules for the use of FORUM. Next, "register" for the Census-BEA Electronic FORUM (command: R).

The following menu of publicly accessible Special Interest Group (SIG) message areas will appear on screen:

1. Open Forum
2. 1990 Census
3. Census Economic
4. TIGER
5. CD-Rom
6. Agriculture Census
7. Pop Ests & Projections
8. Industry

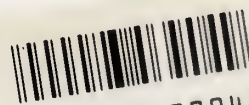
Select "8" to access Current Industrial Reports data.

There are 15 Census Bureau file download areas available to all users. For Current Industrial Reports data, select:

- "F" (files -Go to files transfer menu).
- "C" Census Bureau Download Areas (File Lists); choose the number for CIR's to see what reports are available. Note the file name for the series you need, for example: (M20J9405.TXT or INDM20J.OCT).
- "P" (protocol), choose your download protocol.
- "D" (download to your PC), enter the file name.
- PageDown (this command only works with PROCOMM or PCPLUS software).
- Your system will again ask for protocol. It must match the protocol previously chosen.

When downloading is complete, the screen will flash "completed." You may then exit from the system ("G" for goodbye).

If you need coaching, read the tutorials from the Top Level Menu while on-line, or call the voice number at 301-763-1384. Ask for Nancy Smith or Kendall Oliphant.



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